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ANNUAL PLANNING INFORMATION REPORT FISCAL YEAR 1982 MASSACHUSETTS

LABOR AREA RESEARCH PUBLICATION

Massachusetts Division of Employment Security

job market research

THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY
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ANNUAL PLANNING INFORMATION REPORT
FISCAL YEAR 1982

THE COMMONWEALTH OF MASSACHUSETTS

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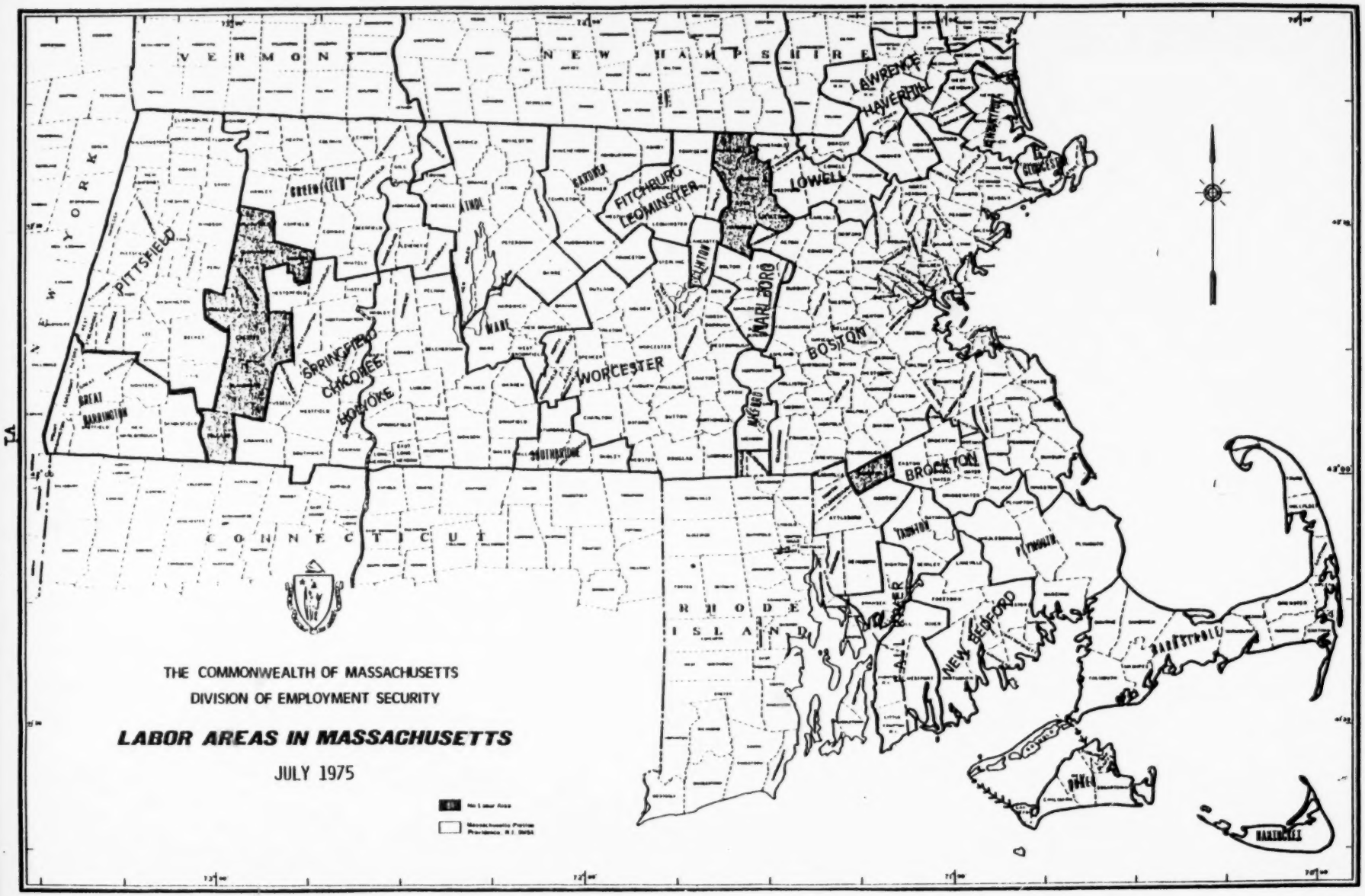
VERMONT
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NEW YORK
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PITTSFIELD
GREAT BARRINGTON
SPRINGFIELD
CHICOPEE
HOLYOKE
WORCESTER
FITCHBURG
LEOMINSTER
LOWELL
LAWRENCE
HAVERHILL
MARLBORO
BOSTON
BROCKTON
FALL RIVER
NEW BEDFORD
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DIVISION OF EMPLOYMENT SECURITY
LABOR AREAS IN MASSACHUSETTS
JULY 1975

IA. Highlights and Conclusions

Massachusetts population grew less than one percent from 1970 to 1980. The northeast part of the state lost population, the southeastern part gained.

We will not weather the next round of the recession as well as we did the first because of international and national economic developments.

The unemployment rate will be higher and closer to the national average than it has been for the past two years.

Nonagricultural wage and salary employment will increase but not as fast as in the recent past. Biggest gainers will be durable goods and services employment.

Budget cutbacks on all levels of government will cause substantial declines in public payrolls.

IB. ASSUMPTIONS AND PROJECTIONS FOR THE ECONOMY

COMMONWEALTH OF MASSACHUSETTS

FEDERAL FISCAL YEAR 1982 (FFY'82)

The Job Market Research staff of the Division of Employment Security gathers data; analyzes and reports on changes in the state's employment and unemployment situation. Even utilizing the most current data and computer models of the state and national economies, it is difficult to project future economic conditions. Forecasting is especially difficult during times of rapid change, such as we have been experiencing. The economic forecasts presented in this report are based on data available at the end of May, 1981.

1) Employment

Total employment in Massachusetts, reported in the Current Population Statistics (CPS) series, is expected to average 2,814,000 during FFY'82, an increase of about 30,000 from FFY'81.

Nonagricultural wage and salary jobs, reported in the Current Employment Statistics series (CES-790) is expected to average 2,731,100, an increase of 50,000 jobs from FFY'81 to FFY'82.

It is important to remember that the CPS estimates the number of people employed or unemployed based on their place of residence, whereas the CES-790 estimates the number of jobs based on employer location. Massachusetts has traditionally had a large proportion of dual job holders. Much of the job increase in services and in wholesale and retail trade will be part-time positions.

PROJECTED EMPLOYMENT BY INDUSTRY GROUP

Industry	Employment (in 000's)		
	FFY 1980 (Actual)	FFY 1981 (Projected)1/	FFY 1982 (Projected)
TOTAL NONAGRICULTURAL EMPLOYMENT	2642.2	2679.1	2731.1
Manufacturing - Total	675.7	669.1	681.6
Durable Goods	409.5	410.8	425.1
Nondurable Goods	266.2	258.3	256.5
Construction	74.8	74.3	81.7
Transportation, Communications and Public Utilities	122.0	124.8	125.2
Wholesale and Retail Trade	570.7	579.2	594.0
Finance, Insurance and Real Estate	157.6	162.5	165.4
Services	629.2	664.8	690.1
Government	412.3	404.3	393.1
Federal	58.5	57.5	56.0
State	97.3	98.6	96.6
Local	256.5	248.2	240.5

1/ Projection based on actual data for seven months and estimates for five months.

2) Unemployment

We project that Massachusetts' unemployment rate will average 5.7 percent during FFY'82, down from 5.9 percent in FFY'81 and one to one-and-a-half percentage points below the national average of 6.9 percent in FFY'82.

	MASSACHUSETTS				U.S.
	Labor Force (in 000's)	Employment (in 000's)	Unemployment (in 000's)	Unemp. Rate(%)	Unemp. Rate(%)
FFY'80	2863.6	2703.3	160.3	5.6	6.8
FFY'81	2957.1	2783.8	173.3	5.9	7.4
FFY'82	2984.1	2814.0	170.1	5.7	6.9

3) Labor Turnover in Manufacturing

Due to a strengthening economy, the number of layoffs is anticipated to decline in FFY'82. On the other hand, the level of quits may also be comparatively low, reflecting in part some uncertainty among the labor force about the strength of the job market. Recalls, which are a function of prior layoffs will be low. The growth in the durable goods industries will be reflected in a stronger rate of new hires.

4) Wages and Inflation

Wages are expected to increase by 8.7 percent, down slightly from the 9.5 percent increase in FFY'81. Total Massachusetts personal income, however, is expected to rise by nearly 11.5 percent. If the proposed decrease in federal personal income taxes takes effect, total disposable income may rise by as much as 12.5 percent. For the first time in several years, the increase in personal income will be greater than the rate of inflation. The era of double-digit inflation is expected to end during FFY'82. The projected increase in the Boston Consumer Price Index (CPI) is 8.7 percent, down from the 11.4 percent in FFY'81. Massachusetts' FFY'81 and '82 rates are both below the national CPI increases for these periods.

5) Credit

Consumers wanting loans of any type; mortgage, home repair, car, or personal; will find that the supply of money will continue to be very tight, with interest rates remaining variable but high throughout FFY'82. Currently, interest rates on home mortgages are over 16 percent, on personal loans over 18 percent, and on commercial and construction loans about 20 percent, however, loans are being made at both higher and lower rates. Banks and credit unions have significantly decreased or stopped making certain kinds of loans altogether.

A major cause of the tight money situation is the shift of money from regular savings accounts, where rates are limited by law, to savings certificates, money market accounts, and treasury obligations. All interest rates are sensitive to changes in U.S. Treasury and Federal Reserve Bank Policies. The size of the Federal tax cut and of the Federal budget deficit will influence the amount and cost of credit in FFY'82. More loan money is expected to go to commercial borrowers next year rather than to those purchasing homes or cars.

There are several pieces of legislation pending before Congress which are expected to affect the level of savings, and thus the amount of credit available. Perhaps the most important is the tax cut, which will increase the amount of disposable (and potentially savable) income. Congress is also considering bills that would: 1.) free certain amounts of savings income from taxes, and 2.) gradually lift the restrictions on the amount of interest banks can pay on passbook accounts.

6) Defense Contracts

Defense contract spending is expected to increase. The dollar value of military prime contracts going to Massachusetts firms has been over five percent of the total awarded nationally for the last three years. We expect our percentage share of the awards to remain steady or increase slightly. With the proposed increase in military spending in the coming years, defense contracts in Massachusetts should provide strong support for the state's economy.

7) Energy

Energy costs are not expected to rise as rapidly during FFY'82 as they have in the recent past. From January 1979 to January 1981 the average price for a gallon of home heating oil rose 104.7 percent in Massachusetts. Continued conservation and conversion to less expensive energy sources will help to hold future prices down. The industrial mix in Massachusetts is not, relatively, energy intensive, therefore, we do not expect that rising energy costs will hurt our industrial production to the extent it may in the rest of the nation. The present world oil glut should moderate gasoline and oil prices. The unknown in the energy situation remains Mideast political conflicts.

8) Exports

Massachusetts will continue to rank among the top ten states exporting manufactured products. Our leading exports will remain high technology equipment: instruments, electronic equipment, and computers. The actual demand for these products will be influenced by the rate of economic recovery in the European Common Market countries.

II. Description of the State

A. Massachusetts Labor Areas

The United States Department of Labor Employment and Training Administration has apportioned the Commonwealth of Massachusetts into the following:

Four Standard Metropolitan Statistical Areas (SMSA)

Boston
Brockton
Fitchburg-Leominster
Lawrence-Haverhill

Seven Major Labor Market Areas (LMA)

Fall River
Lowell
New Bedford
Pittsfield
Springfield-Chicopee-Holyoke
Worcester
Massachusetts Portion of the
Providence-Pawtucket, Rhode Island Labor Area

Sixteen Small Labor Market Areas (LMA)

Athol	Marlborough
Barnstable County	Milford
Clinton	Nantucket County
Dukes	Newburyport
Gardner	Plymouth
Gloucester	Southbridge
Great Barrington	Taunton
Greenfield	Ware

and fifteen towns with no labor area attachment which comprise the Balance of State.

A "labor area" consists of a central city or cities and the surrounding territory within commuting distance. It is an economically integrated geographical unit within which workers may readily change jobs without changing their place of residence. Labor areas usually include one or more entire counties, except in New England where towns are considered the major geographical units.

B. Massachusetts CETA Areas by Prime Sponsors

Boston	New Bedford
Brockton	Pittsfield
Cambridge	Salem
Fall River	Springfield
Lowell	Worcester
Balance of Massachusetts	

C. Massachusetts Job Bank Areas

Boston	New Bedford
Brockton	Pittsfield
Fall River	Springfield-Chicopee-Holyoke
Fitchburg-Leominster	Worcester
Lawrence-Haverhill	Balance of State
Lowell	

D. Description of Massachusetts

Massachusetts is located in the Northeastern section of the Continental United States bordered by the states of Vermont and New Hampshire on the north, the Atlantic Ocean on the east, the states of Rhode Island and Connecticut on the south and the state of New York on the west. The area of the state is 8,093.02 square miles. Of this total, 7,838.68 square miles is land, while water covers an additional 254.34 square miles.

The climate of the State is favorable to industrial enterprise.

	Boston	New Bedford	Pittsfield	Worcester
Normal Temp. in Jan.	29.9°F	29.0°F	21.8°F	25.9°F
Normal Temp. in July	73.7°F	72.8°F	67.8°F	70.6°F
Normal Annual Precip.	42.8 inch.	45.3 inch.	44.4 inch.	45.4 inch.

Long renowned for its historical heritage, Massachusetts can claim impressive historical accomplishments aiding intellectual, cultural and social contributions to the founding and growth of the nation.

The State's Department of Commerce divides the Commonwealth into seven topographic regions. From east to west they are: (1) Cape Cod-flat, nearly at sea level with many lake or pond filled depressions; (2) Boston Basin-gentle contour with tear-drop shaped hills; (3) Seaboard Lowland-flat to gently rolling with 1,000 to 2,000 foot elevations; (4) New England Upland-rolling to hilly plateau with 1,000 to 2,000 foot elevations; (5) Lower Connecticut Valley-flat to gently rolling with less than 100 to 400 foot elevations; (6) Berkshire Hills-rough rolling upland with a general elevation of 2,000 feet and (7) Green Mountains and Foot Hills-rugged and mountainous with 1,500 to 3,000 foot elevations.

E. Transportation (courtesy of the Mass. Dept. of Commerce)

a. General: The Commonwealth of Massachusetts has adequate facilities for handling air, land and water transportation. Thirteen established regional planning agencies, encompassing within their regions all but 8 of the 351 municipalities, have, as one of their areas of interest, the planning for adequate transportation facilities.

b. Air: Logan International Airport in Boston is the heart of air activity in the state. This airport is the 13th busiest in the world, based on number of passengers with tickets starting or terminating at Boston. Logan is the nearest major United States' airport to its downtown business district and to Europe. In addition, the Commonwealth has 52 commercial airports, of which 26 are publicly operated and 26 privately. There are also 3 military airfields and 154 private restricted fields.

c. Commuting: The Boston and Maine Railroad supplies commuter service in the Boston Area subsidized by the Massachusetts Bay Transportation Authority, a state-created agency charged with the responsibility to supply commuter service to 79 municipalities in eastern Massachusetts. Rail commuter service has also been extended outside the Boston area to Concord, N.H. and Providence, R.I. and in Massachusetts to Franklin, Gardner, Haverhill and Rockport. Besides rail service, the MBTA serves commuters with fleets of buses, trolley busses, subway and elevated trains and high-speed trolley cars. Rapid transit facilities have been extended to the north, are being relocated to the railroad right-of-way to the south and extended on the Braintree-Cambridge line to the northwest.

Recognizing the responsibility of government to supply public services when private enterprises finds itself inadequate to the task, the 1973 session of the General Court enacted legislation providing for the creation of 10 transportation authorities to serve 10 population centers of the state, subject to acceptance by the municipalities permitted to form the 10 authorities. Provision is made in the law for the municipalities adjacent to an authority's area to join said area. The 1973 law permitted the following named areas to be served by these authorities: Attleboro-Taunton, Brockton, Cape Cod, Fall River-New Bedford, Fitchburg-Leominster-Gardner, Lawrence-Haverhill, Lowell, Pittsfield, Springfield-Chicopee-Holyoke, and Worcester.

d. Highway: The major highways serving the Commonwealth can best be described as those routes emanating from Boston and vicinity like the spokes of a wheel, or ribs of a fan, strengthed by 2 arcs of radials supporting the ribs or spokes. Listed counter-clockwise: I-95 northeasterly to Maine, I-93 and US-3 to New Hampshire, the cross-state routes-State 2 (to New York), US-20 (to the Pacific Ocean in Oregon), State 9 (to Pittsfield, Mass.), I-90, the Massachusetts Turnpike, (to Seattle, Washington), and the southern route I-95 (to Florida), State 24 (to I-195 in Fall River) and State 3 (to Cape Cod). I-91 passes north to south through the Connecticut River Valley intersecting with I-90, State 9, U.S. 20 and State 2 and on to connect with Canadian Route 10 to Montreal. The circumferential highways are Routes 128 and 495.

e. Rail: The State is served by 3 Class I railroads - Boston and Maine, Central Vermont (Canadian National) and Conrail, other railroads serving Massachusetts are the Fore River, Grafton and Upton, and Providence and Worcester.

Piggy-Back Service is provided within the State by the Boston and Maine Railroad at Boston, Cambridge, Fitchburg, Holyoke and Worcester and by Conrail at Boston, West Springfield and Worcester.

f. Trucking: The Massachusetts Turnpike (IR 90), one of the State's cross-state routes, has 5 tandem trailer lots at Interchange #1 in West Stockbridge with State Routes 41 and 102, #6 in Chicopee with IR 291, #11 in Millbury with State Route 122, #14 in Weston with State Route 128 and #18 in Boston at the Beacon railyard in the Allston section of the city.

g. Water: The six major ports in Massachusetts with 1978 statistics from the U.S. Corps of Engineers are:

Port	Total Port Tonnage	Import Tonnage
Beverly	242,509	---
Boston	26,073,590	6,712,290
Fall River	4,820,427	1,969,260
Gloucester	214,748	125,972
New Bedford-Fairhaven	226,198	62,998
Salem	1,487,230	784,363
Remainder of State	308,145	8

Boston, the largest port, has one of the best natural, deep-water harbors in the world. It is 200 miles nearer Africa and Europe than New York City, 1,200 miles nearer Panama and the West Coast of South America than San Francisco, and nearer Rio de Janeiro and Buenos Aires than any other North Atlantic Port.

Boston is one of the leading container shipping ports in the world with equipment surpassed by none.

F. Population: The state's population increased very slowly during the seventies. The 1980 Census found only 47,867 more individuals in Massachusetts than the 1970 count. The small increase, only eight-tenths of a percentage point, was due to a low birth rate combined with substantial out-migration caused by the two recessions in the seventies. Most areas within the state showed low population growth or population declines. The exceptions were the southeastern part of the state (which showed a substantial increase) and the upper Connecticut River Valley.

In addition, the Census revealed that the state's racial distribution remained predominantly White although there have been substantial increases in the state's Nonwhite population groups. The counties of the state in which the percentage of Whites in the total population fell below 90 percent were Suffolk and Hampden, due to the large numbers of Nonwhites who live in the cities of Boston and Springfield and the outmigration of Whites from these counties. The number of individuals of Spanish origin within the state has been also increased. The Hispanic population was primarily concentrated in Suffolk and Hampden Counties (more than five percent of the population).

The Lawrence/Berkeley Labs at the University of California have processed a demographic breakdown of Massachusetts' estimated population as of July 1, 1982 (Table 3). These are population estimates based on updates of the 1970 Census. Until the age data is available from the 1980 Census, the Lawrence/Berkeley Series represents the best information available concerning the state's population, sex, and age distribution.

G. Labor Force:

Table 4 contains estimates about the race, sex, and age makeup of the labor force in 1982. The individual units which make up the Table will be subject to substantial revisions once the labor force data from the 1980 Census becomes available. Until then, however, these numbers are our best current estimates of the labor force characteristics in 1982. We expect that there will be fewer White males over 35 years of age in the labor force in 1982 than there were in 1970. The greatest estimated numberical increases are found among White women, and the greatest percentage increases among Nonwhites.

The data on Table 5 shows all major demographic groups for which 1980 Labor Force Participation Rate information was available. In each case, the Massachusetts group had a higher participation rate than their national counterparts. Our Labor Force Participation Rates are particularly high in comparison with those of other large industrial states.

Table 1
Total Population
Massachusetts and Counties

Area	1980 Population	1970 Population	Percent Change 1970 to 1980
Massachusetts	5,737,037	5,689,170	+ 0.8
Counties			
Barnstable	147,925	96,656	+53.0
Berkshire	145,110	149,402	- 2.9
Bristol	474,641	444,301	+ 6.8
Dukes	8,942	6,117	+46.2
Essex	633,632	637,887	- 0.7
Franklin	64,317	59,210	+ 8.6
Hampden	443,018	459,050	- 3.5
Hampshire	138,813	123,981	+12.0
Middlesex	1,367,034	1,398,397	- 2.2
Nantucket	5,087	3,774	+34.8
Norfolk	606,587	604,854	+ 0.3
Plymouth	405,437	333,314	+21.6
Suffolk	650,142	735,190	-11.6
Worcester	646,352	637,037	+ 1.5

Source: Bureau of the Census
PHC 80-V-23: 1980 Census Advance Reports

Table 2
Population by Race and Spanish Origin
Massachusetts and Counties

		Race											
		White		Black		American Indian Eskimo & Aleut.		Asian & Pacific Islander		Other		Spanish Origin	
	Total	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Massachusetts	5,737,037	5,362,836	93.5	221,279	3.9	7,743	0.1	49,501	0.9	95,678	1.7	141,043	2.5
Counties													
Barnstable	147,925	142,967	96.6	1,796	1.2	812	0.5	447	0.3	1,903	1.3	1,054	0.7
Berkshire	145,110	142,064	97.9	2,036	1.4	116	0.1	458	0.3	436	0.3	874	0.6
Bristol	474,641	457,376	96.4	4,795	1.0	598	0.1	1,489	0.3	10,383	2.2	10,435	2.2
Dukes	8,942	8,394	93.9	307	3.4	154	1.7	16	0.2	71	0.8	78	0.9
Essex	633,632	613,580	96.8	6,675	1.1	650	0.1	2,377	0.4	10,350	1.6	16,923	2.7
Franklin	64,317	63,541	98.8	285	0.4	81	0.1	204	0.3	206	0.3	311	0.5
Hampden	443,018	396,175	89.4	27,794	6.3	472	0.1	1,565	0.4	17,012	3.8	22,742	5.1
Hampshire	138,813	134,439	96.8	2,013	1.5	138	0.1	1,133	0.8	1,090	0.8	1,733	1.2
Middlesex	1,367,034	1,313,206	96.1	25,358	1.9	1,255	0.1	16,035	1.2	11,180	0.8	23,537	1.7
Nantucket	5,087	4,903	96.4	106	2.1	3	0.1	10	0.2	65	1.3	32	0.6
Norfolk	606,587	591,716	97.5	6,014	1.0	506	0.1	6,001	1.0	2,350	0.4	4,617	0.8
Plymouth	405,437	389,358	96.0	8,144	2.0	678	0.2	1,425	0.4	5,832	1.4	4,429	1.1
Suffolk	650,142	478,227	73.6	127,232	19.6	1,383	0.2	15,501	2.4	27,799	4.3	40,061	6.2
Worcester	646,352	626,890	97.0	8,724	1.3	897	0.1	2,840	0.4	7,001	1.1	14,217	2.2

Source: Bureau of the Census
PHC80-V-23: 1980 Census Advance Reports

Table 3
Population Composition Projected Change
Massachusetts
1970-1982

	Population April 1, 1970	Projected Population July 1, 1982	Change 1970 to 1982 Number	Percent
TOTAL	5,689,170	5,750,000	60,830	1.1
White Male	2,621,003	2,549,639	- 71,364	- 2.7
0-15	818,386	582,526	-235,860	-28.8
16-17	101,553	103,568	2,015	2.0
18-19	94,566	103,568	9,002	9.5
20-24	203,459	261,625	58,166	28.6
25-34	309,779	432,203	122,424	39.5
35-44	299,287	283,941	- 15,346	- 5.1
45-64	553,719	528,967	- 24,752	- 4.5
65+	240,254	253,241	12,987	5.4
White Female	2,863,354	2,797,861	- 65,493	- 2.3
0-15	786,308	554,314	-231,994	-29.5
16-17	97,336	102,764	5,428	5.6
18-19	103,082	102,764	- 318	- 0.3
20-24	232,024	257,381	25,357	10.9
25-34	319,591	425,733	106,142	33.2
35-44	311,648	298,470	- 13,178	- 4.2
45-64	629,217	616,278	- 12,939	- 2.1
65+	384,148	440,157	56,009	14.6
Nonwhite Male	97,063	190,543	93,480	96.3
0-15	37,807	62,073	24,266	64.2
16-17	3,619	7,835	4,216	116.5
18-19	3,931	7,835	3,904	99.3
20-24	8,402	25,554	17,152	49.0
25-34	13,904	36,240	22,336	160.6
35-44	10,783	21,560	10,777	99.9
45-64	13,394	22,407	9,013	67.3
65+	5,223	7,039	1,816	34.8
Nonwhite Female	107,750	211,957	104,207	96.7
0-15	37,658	62,806	25,148	66.8
16-17	3,631	7,805	4,174	115.0
18-19	4,337	7,805	3,468	80.0
20-24	10,603	26,489	15,886	149.8
25-34	16,579	43,034	26,455	159.6
35-44	12,394	26,815	14,421	116.4
45-64	15,441	27,073	11,632	75.3
65+	7,107	10,130	3,023	42.5

Source: Lawrence/Berkeley Labs

Table 4

Labor Force Composition Projected Change

1970 - 1982

Massachusetts

Race and Age	April 1, 1970	July 1, 1982	Change 1970 to 1982 Number	Percent
TOTAL	2,389,419	2,977,900	588,481	24.6
White Males	1,384,209	1,489,877	105,668	7.6
16-17	46,890	72,577	25,687	54.8
18-19	53,302	70,471	17,169	32.2
20-24	145,971	205,752	59,781	41.0
25-34	286,184	397,331	111,147	38.8
35-44	283,408	262,963	- 20,445	- 7.2
45-64	499,336	422,380	- 76,956	-15.4
65+	69,118	58,403	- 10,715	-15.5
White Females	931,616	1,318,033	386,417	41.5
16-17	40,471	96,348	55,877	138.1
18-19	54,112	74,205	20,093	37.1
20-24	141,914	206,931	65,017	45.8
25-34	137,608	311,057	173,449	126.0
35-44	157,991	215,367	57,376	36.3
45-64	353,738	368,917	15,179	4.3
65+	45,783	45,209	- 574	- 1.3
Nonwhite Males	40,457	85,119	44,662	110.4
16-17	1,092	3,580	2,488	227.8
18-19	1,656	3,693	2,037	123.0
20-24	5,059	14,250	9,191	181.7
25-34	11,197	27,377	16,180	144.5
35-44	8,880	17,241	8,361	94.2
45-64	11,266	17,131	5,865	52.1
65+	1,307	1,847	540	41.3
Nonwhite Females	33,137	84,871	51,734	156.1
16-17	978	5,860	4,882	499.2
18-19	1,976	5,368	3,392	171.7
20-24	5,441	16,285	10,844	199.3
25-34	7,966	24,107	16,141	202.6
35-44	6,733	16,649	9,916	147.3
45-64	8,879	15,355	6,476	72.9
65+	1,164	1,247	83	7.1

Table 5
Labor Force Participation Rates
1980 Annual Average

	Total	Men	Women	Youth 16-19	Whites	Blacks and Others*
United States	63.8	77.4	51.6	56.9	64.1	61.2
Massachusetts	65.6	78.4	54.1	62.5	65.5	67.5
U.S. Massachusetts Percentage Point Difference	+ 1.8	+ 1.0	+ 2.5	+ 5.6	+ 1.4	+ 6.3
Massachusetts Ranking Among the States	21st	24th	18th	14th	24th	6th
Alabama	59.2	72.5	47.2	43.9	60.4	55.8
Alaska	71.3	82.2	60.6	53.3	75.4	54.0
Arizona	62.3	76.5	49.8	63.8	62.5	57.3
Arkansas	60.0	72.4	49.0	54.8	61.3	52.3
California	65.5	78.3	53.8	59.6	65.8	63.7
Colorado	71.4	84.0	59.5	63.3	71.3	72.6
Connecticut	67.7	81.1	56.0	63.5	67.5	70.7
Delaware	64.4	78.1	52.1	60.7	64.7	63.1
Florida	56.3	68.5	45.8	55.8	55.1	63.6
Georgia	64.4	77.4	53.1	53.6	64.8	63.0
Hawaii	63.8	72.0	56.7	50.1	61.3	64.9
Idaho	60.0	73.1	47.4	52.3	60.0	--
Illinois	65.5	79.6	52.6	58.4	66.6	58.6
Indiana	65.7	79.4	53.2	58.6	65.6	66.7
Iowa	66.6	81.3	52.9	65.2	66.9	--
Kansas	67.6	79.9	56.1	65.9	67.6	67.0
Kentucky	62.6	76.6	50.0	54.5	62.9	58.1
Louisiana	60.1	75.3	46.6	45.6	61.1	57.3
Maine	61.5	73.9	50.3	54.0	61.4	--
Maryland	68.3	80.8	57.1	60.0	67.6	71.0
Michigan	63.0	76.9	50.4	60.4	63.9	58.3
Minnesota	69.6	80.6	59.1	71.9	69.5	70.0
Mississippi	59.9	73.1	48.5	48.1	61.0	57.5
Missouri	58.1	70.7	47.0	49.1	58.7	52.4
Montana	64.4	77.6	51.9	56.7	64.9	54.1

Table 5
Labor Force Participation Rates
1980 Annual Average

(continued)

	Total	Men	Women	Youth 16-19	Whites	Blacks and Others*
Nebraska	66.6	79.9	54.5	64.2	66.7	63.9
Nevada	71.1	82.8	59.1	62.8	71.0	72.7
New Hampshire	68.8	81.1	57.3	65.7	68.7	--
New Jersey	64.4	78.6	52.3	51.8	64.5	63.5
New Mexico	61.0	76.4	46.9	51.2	61.5	55.7
New York	60.0	74.5	47.7	45.1	60.4	57.6
North Carolina	66.6	78.8	55.6	56.1	67.7	62.6
North Dakota	65.0	78.6	51.7	59.1	65.3	54.5
Ohio	63.7	78.7	50.5	58.6	64.1	60.5
Oklahoma	61.7	76.3	48.7	56.6	62.5	47.7
Oregon	65.8	78.3	53.8	61.3	65.8	66.9
Pennsylvania	60.0	75.0	46.6	55.3	60.2	57.2
Rhode Island	65.5	77.7	54.7	66.3	65.6	63.8
South Carolina	62.6	75.6	51.2	44.3	64.0	59.1
South Dakota	67.5	80.7	55.3	67.1	68.2	52.7
Tennessee	61.3	74.3	49.5	49.7	61.9	58.2
Texas	65.8	80.4	52.3	58.8	66.0	64.7
Utah	65.9	81.6	51.6	69.7	65.9	65.5
Vermont	66.5	79.0	54.8	61.8	66.5	--
Virginia	66.2	79.6	54.5	54.9	67.2	61.8
Washington	64.8	78.1	52.3	61.8	64.8	65.0
West Virginia	54.7	71.5	39.1	45.8	54.6	--
Wisconsin	67.6	79.8	56.3	68.9	67.8	64.0
Wyoming	70.0	84.5	55.5	63.3	70.2	--

* Labor Force Participation Rates for Black and Others are only available for 43 states.

Source: Draft copy, Geographic Profile of Employment and Unemployment-1980.

III. Economic Development and Outlook Through Federal Fiscal Year 1982

In this section we will give a brief review of Massachusetts' employment trends in the last ten years. Additionally, we will give our projections for employment during Federal Fiscal Year 1982. The data for the review and the projections are presented in seven tables:

Table 6A shows the Current Employment Series (ES-790) data on Employment for calendar years 1971 through 1980.

Table 6B gives Current Employment Series data also. This table has calendar years 1979 and 1980 again, and then monthly figures for January through June 1981.

Table 7 presents the percent distribution of the state's nonagricultural wage and salary employment by industry from 1971 through 1980. The percent distribution data should be seen in context with Table 6. Nonagricultural wage and salary employment increased by 423,600 during the ten years. A given industry's annual average employment could have increased during the ten years and concurrently the industry's percent share of total employment could have declined. To retain the same percentage share of total state nonagricultural employment, an industry's job rolls would have to have grown 19 percent since 1971, or 16.5 percent since 1975's recessionary low.

Table 8 lists the state's industrial employment levels from 1976 to 1980, and the relative share (by percent) of each industry's subsectors.

Table 9 presents the employment levels for the manufacturing industries in April 1981. The data shows the percent share of the industries' employment which is production workers. (Commonly referred to as blue collar employment).

Table 10 presents projections for the state's employment levels through Federal Fiscal Year 1982. These projections are based on the June 1981 forecast of the Massachusetts Economic Policy (MEPA) model done by George I. Treyz and Roy E. Williams at the University of Massachusetts, Amherst campus. The MEPA model is "driven" by the national forecasting model of Data Resources Incorporated, Lexington, Massachusetts. We in the Labor Area Research Department have adjusted some of the employment totals.

Table 11 illustrates by manufacturing industry the Bay State's percentage share of national manufacturing employment from FFY 1980 through FFY 1982. This information is derived from the June 1981 MEPA model forecast.

Employment Review

The Massachusetts economy changed greatly during the 1970's, with strong growth in the high technology and services related industries. From 1971 to 1980 the greatest employment growth was in durable goods manufacturing; wholesale and retail trade; services, finance, insurance, and real estate and government.

Manufacturing is slightly less pervasive in Massachusetts today than it was ten years ago. This is due to the drop in nondurable goods employment. In 1971, nearly one of every seven nonagricultural workers in the state worked in a nondurable type goods manufacturing industry. By 1980 the proportion had gone to less than one in ten. No nondurable goods industry had a higher percentage of total nonagricultural employment in 1980 than in 1971. In contrast, durable goods manufacturing employment has a somewhat larger portion of employment than it did ten years ago. The greatest relative increases were shown by nonelectrical machinery, electrical machinery, transportation equipment, and instruments. Looking ahead, we expect manufacturing to continue to be 25-26 percent of statewide nonagricultural employment. The durable goods sector will increase its relative share, while nondurable goods industries continue their relative decline.

The nonmanufacturing industries have also had a mixed performance. Construction employment decreased both in absolute and relative terms. From 1971 to 1980 annual average construction employment decreased by over 25,000 jobs. To put it another way, in 1971 one out of every twenty-two nonagricultural jobs was in construction; by 1980 the ratio was one out of thirty-six. While both transportation and public utilities,and wholesale and retail trade have greater employment than ten years ago, their relative shares of total employment have declined. The proportion of the finance, insurance, and real estate industries has increased very little. The services sector has had the greatest gain, employment increased by 43 percent during the ten years. In 1980, one out of every four nonagricultural jobs was in services, in 1971 the ratio had been one out of five. Government's share of total employment increased steadily until 1978. Starting in 1979 government employment began to decline. There will be even greater drops in government employment due to budget cuts at all levels of government. The data for state and local government for 1979 and 1980 presents an illusion that state job rolls are increasing while those for municipalities and counties are going down. The actual trend is more complex. Both state and local employment declined from one year to the next. At the same time however, certain local government employees, mostly county courts and hospital workers, were transfered onto the state payrolls. (This resulted in SIC recoding in employment trend series). This move did help ease the burden on local property taxes. It also, unfortunately, masked the trend decline in the state payroll, and made the local government drop look larger than it actually was.

Employment Outlook

There are many elements which need to be considered when assessing future employment trends. Among these elements are taxes, energy costs, and the inflation rate. We do not mean to belittle the importance of any of these factors. For our present purposes, however, it will be sufficient to say that the Administration expects the Federal tax cut to stimulate economic growth and savings, energy costs are more stable than they have been in recent years, and the inflation rate next year is expected by the Administration to drop below 10 percent. The most important considerations for us for next year will be: 1)the trend of the national recession and how it will effect local employment, 2)growth prospects for the high-technology industries and 3)the affects of government cuts.

The latest projections from Data Resources, Inc. (DRI) are that the present decline in economic activity will continue for several more months, with only a modest recovery beginning during the quarter October/December 1981. Traditionally, there has been a lag between economic trends nationally and the business cycle in Massachusetts. That is our local economy usually goes into recession later, and recovers later than does the national economy. Although overall the Bay State weathered the first round of this recession very well, we don't expect to be quite so lucky this time. There are several reasons for this. The cost of credit (interest rates) has remained high longer than anticipated - and interest rates are expected to be high next year as well. At the same time, our private sector could have trouble absorbing the rather large number of government workers we expect to be laid off. Therefore, we believe that Massachusetts could have recessionary conditions right through the January/March 1982 quarter. If so, this will be more consistent with our past trend vis-a-vis the national economy during slowdowns.

Second, there has been a slowing in the rapid growth of many of our high-technology companies. A few have even laid off workers. High interest rates have been a factor. They have made it harder for these firms to service their debts, to expand, and they have increased the cost of high-technology products to customers who need to buy on credit, such as small businesses. Additionally, the high interest rates have helped to increase the value of the dollar against most foreign currencies. Many of our firms export a significant portion of their production. Foreign currency translation has caused profits loss.

Because almost all high-tech products are very cost efficient, the appreciation of the dollar has not had a crippling effect. Major high-tech firms with financial reserves, foreign currency balance sheets and international experience may be unscathed. However, anything which weakens our firms' competitive position in relation to foreign competition, can't be considered a help, and may have a negative market-share effect when the Western European economy recovers.

Lastly, government at all levels is cutting back. Nationally, the Federal budget cuts will mean fewer Federal workers, largely the result of attrition. The cuts in the Federal budget will also cause lower funding, and fewer workers in some state and local government programs. Ironically, decreased Federal spending and deregulation may effect private sector industries such as noncommercial research, social services, legal services, and regulatory instruments production. In Massachusetts, the Federal cuts are compounded by Proposition 2½. Since many of our readers have received blow-by-blow accounts on the impact of Propostion 2½ from the media, we will not examine the details of the effect on municipal and state budgets. In terms of employment, the effect could be as much as 20,000 state and local government jobs, with ripple effects on employment in social services, consulting and public relations services, and noncommercial research services.

In summation, our employment projections could be too optimistic. We have forecast that nonagricultural wage and salary employment during FFY 1982 will average 2,731,000. It now appears that this may be about 10,000 too high. Nevertheless, we do not expect any major sectors except nondurable goods manufacturing and government to have lower employment levels in FFY 1982 than they did in FFY 1981.

Summarizing employment trends by Industry:

Durable Goods Manufacturing

Lumber (24) This industry should remain stable. The lack of new housing starts is only partially offset by larger exports. Greater numbers of new housing starts in 1982 will help. Improved technology and labor savings techniques will reduce the replacement need for some workers.

Furniture (25): A small increase is expected due to demand for office furniture.

Stone,Clay and Glass (32): Nationally, this industry is projected to grow. Locally, however, we expect employment will remain stable.

Primary Metals (33): The changes within this industry are important. There has been a steady change from the forging and rolling of ferrous metals to nonferrous metals. Employment in Primary Metals is greatly related to demand in the Fabricated Metals and Machinery Industries. Since we expect employment in those industries to expand, we are projecting an increase for Primary Metals as well.

Fabricated Metals (34): This industry will grow due to continued demand for parts by machinery industries. Firms such as Wyman-Gordon are expected to benefit from reindustrialization and national defense efforts.

Nonelectrical Machinery (35): The metal working machinery, special industrial machinery, and the general industrial machinery components within this industry are not expected to show significant growth next year. This should be offset, however, by continued strong demand for office and computing equipment. The continued strength of the export market for these machines is a critical variable. Another important factor for this industry is the increased long-term demand for engines due to higher defense outlays.

Electrical Machinery (36): Will continue to grow. Communications equipment and electronic components are the strength in this industry. Foreign competition in the development of advanced semiconductors and integrated circuits may be cause for concern. If export markets start to dry up this industry would be hurt. The sales of electronic equipment and systems to the U.S. Government, especially to the Defense Department will continue as a major factor in the growth of this industry.

Transportation Equipment (37): An overall decline is expected. Employment in the making of bicycles and mopeds is down. Increased defense expenditures should help the long-term prospects for aircraft, shipbuilding, and guided missiles. Automobile employment is expected to be stable next year because smaller cars are produced here, and because demand for automobiles is expected to gradually increase.

Instruments (38): Growth is expected next year as part of a nationwide expansion in this industry. The picture isn't totally favorable, however. Optical instruments employment has been declining. The long-term affects of decreased Federal regulations on industry, such as performance standards for commercial environments, may be fewer workers making measuring and controlling instruments. We are hoping for continued recovery in photographic equipment and supplies. Exports are critical.

Nondurable Goods Manufacturing

Food (20): Slight decrease in employment. This industry is being hurt by decreased demand for prepared food by the fast food outlets. Reduced air flight schedules will further diminish prepared food demand.

Textiles (22): A very slight decline. Companies which manufacture automobile upholstery and home furnishings have been hurt by the recession.

Apparel (23): No real change. Slight growth nationally.

Paper (26): A small decline in employment. This industry is both energy and capital intensive. To lower costs many plants have been largely automated, which means increased production but lower employment. The recycling of paper will probably be a growth sector of this industry for the next several years.

Printing and Publishing (27): Although this past year saw the closing of a greeting card factory, most of the employment decline for this industry has been, and in the future will be, attributable to automation. We believe that the industry remains basically healthy, but the long-range trend will be towards lower employment. It is possible that within the intermediate future that there will be mergers among newspaper publishers.

Chemicals (28): Employment is expected to go up by a few hundred workers. The current oil "glut" should help stabilize prices and employment in the plastics and synthetics subsector (SIC 282).

Rubber and Miscellaneous Plastics Products (30): The rubber part of this industry now accounts for only about a quarter of the employment. Rubber footwear is our only growth rubber sector. Miscellaneous plastics products should be fairly stable.

Leather (31): Virtually no change is expected. Although employment in shoe manufacture is down, some speciality shoe firms have been expanding. Speciality casual shoes such as Sperry Top-siders and Grasshoppers espadrilles have sold well as the "Preppy" look took hold of fashion.

Nonmanufacturing

Construction: A considerable growth in jobs is expected. Although the residential construction market will probably still be depressed, a great deal of nonresidential construction is already underway. In fact, Boston is experiencing what is described as a "boom" in commercial construction. Despite this summer's carpenters' strike, which halted most construction projects for several weeks, the short and the long-term employment prospects for this industry are very good.* Residential building activity may improve if interest rates come down next year. Barnstable County has experienced increased construction of retirement homes and second residences despite a generally depressed residential market.

Transportation and Utilities: We have forecast a small increase in jobs. This projection, however, may be optimistic due to recent events. The air traffic control problem will cause a major reduction in the number of flights offered by most airlines. With fewer planes flying, the airline companies will need fewer workers. This will cause quite a few layoffs immediately, and very little hiring for at least the next year. The air traffic controller's strike has highlighted the dependency of many of our firms on being able to air freight their products to distant markets. In addition, unprofitable routes are being phased out as a result of airline deregulation.

* This assumes that MIFA loans and UDAG, and CDBG grants will continue to be a stimulis to commericial construction.

Communications employment presents a varying picture. The Bell System is automating wherever possible, so their employment will continue to go down due to attrition. Federal deregulation, however, may lead to more, smaller, companies in the telephone industry. Cable television will become increasingly important. Most of the state's large cities have cable TV, or are in the process of contracting for a cable television system. There will be increased employment in the installation and servicing of the cable hookups to private residences. Additionally, it is hoped that Boston will eventually become a production center for cable network programs. In addition, Satellite telecommunications systems are experiencing growth in the commercial market.

We do not expect large increases in oil, gas or electricity companies employment. Over the past several years, thousands of Bay State homeowners have changed from heating their homes with oil to heating with gas. We expect far fewer conversions next year. The natural gas shortage caused by the abnormally cold weather last winter has scared off many potential gas users. It also made gas companies hesitate to add large numbers of new customers at this time. Another factor is that the price differential between oil and natural gas has narrowed. The present surplus of oil on international markets has stabilized oil prices at least for a time, while natural gas prices have risen due to deregulation. Nevertheless, instability in the Middle East remains a variable in any employment projection.

Wholesale and Retail Trade: We expect that the number of jobs will increase by almost 3 percent. There will be two reasons for this. The first and most important is that in FFY'82 disposable income is expected to rise faster than the rate of inflation. That is, for the first time in several years consumers will have increased purchasing power. The other cause for increased employment will be that more of the jobs are now part-time. So it is possible to have the number of jobs increase with little or no increase in the number of hours worked.

Finance, Insurance, and Real Estate: This sector's employment is increasing nationally. Local firms are expected to follow the same trend. The tax and Federal budget cuts Congress has voted for should help because they are intended to stimulate business activity and the accumulation of savings. The expected lower rates of inflation should make savings accounts and insurance policies more attractive. Lower interest rates will stimulate a sluggish housing market. Increased automation within banking and insurance will harness employment growth in unskilled clerical jobs.

Services: Services will continue to grow relatively faster than total employment, although not as fast as it has in past years. Business services, hospitals, industrial services, and auto repair services should all either grow or show stable job levels. Personal services will continue to slowly decline as it has for several years. Employment in hotels and motels was expected to do better than it has. This year we have not had as many tourists as expected. The air traffic controllers' strike will make things even worse in the short-run. Long-term, however, there will be large increases in hotel/motel employment due to the many hotels under construction in Boston. The interdependency between government and the service industry has not been tested in recent years. Health services, legal services, educational services, social services, and non-commercial educational, scientific and research organizations have experienced some growth in employment in the past due to either Federal grants or Federal regulatory requirements. Title XX of the Social Security Act budget reductions will reduce the amount of funds available for private sector "Service providers". Additional Federal, state, and local budget cuts may "trickle down" to reduction in employment in some service sectors.

Government: We have projected a loss of 11,200 jobs, or 2.8 percent. It appears we have underestimated the size of the decrease. The government budget cuts have been deeper, and will necessitate more layoffs, than we had expected when we made our projections at the end of May.

Federal: The hiring freeze ordered last last year by President Carter has already reduced the job rolls through attrition. The budget that Congress has passed for next year will necessitate further cuts. Post office employment will decline slightly because of increased automation. There will be fewer air traffic controllers. A positive note is that the New England and Northeast Federal Aeronautic Administration Regional offices are expected to be consolidated at the facility in Burlington. This consolidation will mean an addition of several hundred workers (mostly transfers from New York) which will partly offset losses in other agencies, if plans are not cancelled by the FAA.

State: It isn't certain as yet how many state workers will have to be laid off. We originally felt there would be a net loss of about 2,000 positions. The latest estimates are that there will be a reduction of 3,000 to 8,000 in staff.

Not all of this loss will be from layoffs, much will be through attrition. Also, these reductions are not totally the result of Proposition 2½, as is commonly supposed. Federal budget cutbacks will necessitate some of the decrease, particularly in the Division of Employment Security and the Department of Welfare.

Local: At first we felt that Proposition 2½ would mean a reduction in local government employment of 12,000 to 15,000, or about 5 percent. By July, however, we already had 14,000 municipal workers collecting unemployment benefits. Because of state reimbursements to cities and towns, some of these claimants will be back working at their old jobs in the Fall. Now that the state has announced how much increased aid it is giving local communities, many laid off police and firemen are being recalled. Because of the way their contracts were written, several hundred teachers who will be in the schools next Fall have been able to collect this summer. On the other hand, several thousand other teachers and municipal workers could be laid off over the next several months.

To sum up, we believe that government employment will be significantly lower than we had thought in May. Job levels could be: Federal - 55,500; state - 94,500; local - 233,500. The government total would then be 383,500 jobs, or about 10,000 lower than we had thought originally.

Table 6A

Employment in Massachusetts
Calendar Years 1971-1980
(in 000's)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Nonagricultural-Total	2224.2	2251.7	2333.5	2353.7	2273.1	2323.5	2416.0	2526.3	2603.5	2647.8
Manufacturing	600.2	610.2	634.7	639.3	577.8	593.6	621.0	652.1	672.1	673.1
Durables	305.7	314.8	339.9	354.7	318.9	325.8	352.3	378.9	401.1	409.7
Ordnance	16.8	1/	1/	1/	1/	1/	1/	1/	1/	1/
Lumber & Furniture	14.2	15.4	16.0	15.3	12.8	13.1	13.6	14.0	13.9	13.3
Stone, Clay & Glass	11.6	12.7	14.2	15.0	10.9	12.1	12.3	13.1	13.7	13.1
Primary Metals	17.1	14.0	16.2	17.3	15.5	16.1	16.9	17.1	17.6	17.3
Fabricated Metals	38.5	52.2	56.1	57.2	49.2	50.4	51.8	53.2	55.1	54.1
Nonelectrical Mach.	68.0	66.0	73.1	78.5	74.0	74.0	82.0	90.4	101.6	109.5
Electrical Machinery	84.6	81.6	88.1	93.7	82.8	83.8	91.0	98.2	104.6	109.4
Transportation Equip.	23.1	34.3	33.2	30.5	30.0	31.2	33.2	36.4	37.1	35.4
Instruments	31.3	38.6	43.0	47.2	43.7	45.1	51.5	56.5	57.5	57.6
Nondurables	295.0	295.4	294.8	284.6	258.9	267.8	268.7	273.2	271.0	263.4
Food & Kindred Prod.	36.0	33.1	31.5	30.4	28.6	29.5	29.1	28.5	28.2	27.3
Textile Mill Prod.	28.8	31.0	31.1	28.7	25.2	27.7	27.9	28.2	27.1	25.4
Apparel	46.9	45.9	45.8	44.2	41.1	43.2	42.8	42.1	40.7	39.8
Paper & Allied Prod.	32.7	32.2	33.2	32.6	27.9	28.9	29.4	30.4	29.8	28.9
Printing & Publishing	42.5	43.9	43.5	42.0	40.3	41.0	42.2	42.9	44.0	43.7
Chemicals	18.4	19.5	20.3	20.9	19.8	18.4	17.3	17.7	18.2	18.3
Rubber & Misc. Plastics	31.3	32.2	34.6	33.7	27.8	29.6	30.3	32.1	32.5	31.0
Leather & Leather Prod.	31.8	30.4	26.8	24.1	23.0	24.1	22.8	23.5	22.2	20.8
Other Nondurables	26.6	27.2	28.0	28.0	25.2	25.4	26.9	27.8	28.3	28.2
Nonmanufacturing	1624.0	1641.5	1698.8	1714.4	1695.3	1729.9	1795.0	1874.2	1931.4	1974.7
Construction	99.4	103.3	102.7	90.6	74.2	67.1	66.7	72.8	75.6	73.2
Transp., Comm., and Public Utilities	117.0	121.5	123.5	123.6	113.7	112.8	114.9	117.3	120.5	122.3
Wholesale & Retail Tr.	500.4	501.5	517.0	520.5	511.8	520.2	533.7	547.3	566.3	571.3
Fin., Ins., & Real Est.	130.2	128.8	133.7	136.9	135.8	137.8	143.2	146.7	150.4	159.0
Services, Mining & Misc.	446.4	443.3	470.3	488.5	494.7	516.2	528.6	560.9	601.9	638.6
Government	330.6	343.1	351.6	354.3	365.1	375.8	407.9	429.2	416.7	410.3
Federal	62.3	64.4	61.9	58.3	58.0	57.8	56.5	57.4	58.0	58.3
State	268.3	278.7	289.7	296.0	307.1	318.0	86.8	371.8	94.1	97.8
Local	2/	2/	2/	2/	2/	2/	264.6	2/	264.6	254.2

1/ SIC Code Change

2/ Local Government included in State Total

Table 6B
Employment in Massachusetts - 1979-1981
(in 000's)

	Annual Average 1979	Annual Average 1980	January 1981	February 1981	March 1981	April 1981	May 1981	June 1981
Nonagricultural Total	2603.5	2647.8	2609.6	2629.1	2652.3	2682.1	2691.6	2702.4
Manufacturing Total	672.1	673.1	663.8	666.8	667.3	671.7	670.9	679.7
Durable Goods Total	401.1	409.7	408.2	408.9	409.6	413.3	410.6	415.0
Lumber & Furniture	13.9	13.3	13.6	13.5	13.8	13.9	13.9	14.0
Stone, Clay & Glass	13.7	13.1	12.4	12.4	12.4	12.7	12.6	12.9
Primary Metals	17.6	17.3	16.7	16.9	17.0	17.0	16.9	17.1
Fabricated Metals	55.1	54.1	53.3	53.3	53.0	53.0	52.6	52.7
Nonelectrical Machinery	101.6	109.5	109.6	110.0	110.3	111.5	110.3	111.0
Electrical Machinery	104.6	109.4	109.7	110.3	110.7	112.2	111.1	113.1
Transportation Equip.	37.1	35.4	34.4	34.0	33.8	33.9	33.5	33.8
Instruments	57.5	57.6	58.5	58.5	58.6	59.7	59.7	60.4
Nondurables	271.0	263.4	255.6	257.9	257.7	258.4	260.3	264.7
Food & Kindred Prod.	28.2	27.3	26.0	26.0	25.8	26.0	26.6	26.8
Textile Mill Products	27.1	25.4	24.6	24.7	24.7	25.3	24.9	25.2
Apparel	40.7	39.8	39.1	39.7	39.7	39.7	40.2	40.5
Paper & Allied Prod.	29.8	28.9	28.5	28.7	28.6	28.5	28.4	28.9
Printing & Publishing	44.0	43.7	42.7	43.0	43.1	43.0	43.4	44.5
Chemicals	18.2	18.3	17.7	17.9	18.0	17.8	17.8	18.1
Rubber & Misc. Plastics	32.5	31.0	30.3	30.8	30.6	30.6	30.8	31.6
Leather & Leather Prod.	22.2	20.8	19.7	20.1	20.1	20.2	20.5	20.6
Other Nondurables	28.3	28.2	27.0	27.0	27.1	27.3	27.7	28.5
Nonmanufacturing	1931.4	1974.7	1945.8	1962.3	1985.0	2010.4	2020.7	2022.7
Construction	75.6	73.2	64.6	61.6	63.5	69.3	70.8	71.9
Transp., Comm.,Pub. Util.	120.5	122.3	123.2	123.6	124.1	124.5	125.0	126.9
Wholesale & Retail Tr.	566.3	571.3	566.9	560.1	564.3	576.2	583.4	590.8
Fin., Ins., & Real Est.	150.4	159.0	160.3	160.4	161.7	161.6	163.5	167.1
Services., Mining & Misc.	601.9	638.6	632.0	650.7	663.2	675.7	676.0	668.2
Government	416.7	410.3	398.8	405.9	408.2	403.1	402.0	397.8
Federal	58.0	58.3	57.2	57.8	57.7	57.8	57.9	57.4
State	94.1	97.8	94.5	98.9	100.5	99.5	99.3	95.3
Local	264.6	254.2	247.1	249.2	250.0	245.8	244.8	245.1

Source: Current Employment Series, ES-790

Table 7
Employment in Massachusetts - Calendar Years 1971-1980
Percent Distribution

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Nonagri. Wage & Salary Employment-Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Manufacturing	26.98	27.10	27.20	27.16	25.42	25.55	25.70	25.81	25.82	25.42
Durable Goods	13.72	13.98	14.57	15.07	14.03	14.02	14.58	15.00	15.41	15.47
Ordnance	0.76	1/	1/	1/	1/	1/	1/	1/	1/	1/
Lumber & Furniture	0.64	0.69	0.69	0.65	0.56	0.56	0.57	0.55	0.53	0.50
Stone, Clay & Glass	0.52	0.56	0.61	0.64	0.48	0.52	0.51	0.52	0.53	0.50
Primary Metals	0.77	0.62	0.69	0.74	0.68	0.69	0.70	0.68	0.68	0.65
Fabricated Metals	1.73	2.32	2.40	2.43	2.16	2.17	2.14	2.11	2.12	2.04
Nonelectrical Machinery	3.06	2.93	3.13	3.34	3.26	3.19	3.39	3.58	3.90	4.14
Electrical Machinery	3.80	3.62	3.78	3.98	3.64	3.61	3.77	3.89	4.02	4.13
Transportation Equipment	1.04	1.52	1.42	1.30	1.32	1.34	1.37	1.44	1.43	1.34
Instruments	1.41	1.71	1.84	2.01	1.92	1.94	2.13	2.24	2.21	2.18
Nondurables	13.26	13.12	12.63	12.09	11.39	11.53	11.12	10.81	10.41	9.95
Food & Kindred Products	1.62	1.47	1.35	1.29	1.26	1.27	1.20	1.13	1.08	1.03
Textile Mill Products	1.29	1.38	1.33	1.22	1.11	1.19	1.16	1.12	1.04	0.96
Apparel	2.11	2.04	1.96	1.88	1.81	1.86	1.77	1.67	1.56	1.50
Paper & Allied Products	1.47	1.43	1.42	1.39	1.23	1.24	1.22	1.20	1.15	1.09
Printing & Publishing	1.91	1.95	1.86	1.78	1.77	1.77	1.75	1.70	1.69	1.65
Chemicals	0.83	0.87	0.87	0.89	0.87	0.79	0.72	0.70	0.70	0.69
Rubber & Misc. Plastics	1.41	1.43	1.48	1.43	1.22	1.27	1.25	1.27	1.25	1.17
Leather & Leather Prod.	1.43	1.35	1.15	1.02	1.01	1.04	0.94	0.93	0.85	0.79
Other Nondurables	1.20	1.21	1.20	1.19	1.11	1.09	1.11	1.10	1.09	1.07
Nonmanufacturing	73.02	72.90	72.80	72.84	74.58	74.45	74.30	74.19	74.18	74.58
Construction	4.47	4.59	4.40	3.85	3.26	2.89	2.76	2.88	2.90	2.77
Trans., Comm., Pub. Util.	5.26	5.40	5.29	5.25	5.00	4.86	4.76	4.64	4.63	4.62
Wholesale & Retail Trade	22.50	22.27	22.16	22.11	22.52	22.39	22.09	21.66	21.75	21.58
Fin., Ins., & Real Est.	5.85	5.72	5.73	5.82	5.97	5.93	5.93	5.81	5.78	6.01
Services, Mining & Misc.	20.07	19.69	20.15	20.76	21.76	22.22	21.88	22.20	23.12	24.19
Government	14.86	15.24	15.07	15.05	16.06	16.17	16.88	16.99	16.00	15.50
Federal	2.80	2.86	2.65	2.48	2.55	2.49	2.34	2.27	2.23	2.20
State	12.06	12.38	12.42	12.58	13.51	13.69	3.59	14.72	3.61	3.70
Local	2/	2/	2/	2/	2/	2/	10.95	2/	10.16	9.60

1/ SIC Code Change

2/ Local Government included in State Total.

Table 8
Massachusetts Private Industrial Employment
and
Percent Distribution of Subsectors

		1976	1977	1978	1979	1980[1]
	Manufacturing	593,600	621,100	652,500	671,700	663,000
20	Food & Kindred Products	29,500	29,000	28,600	28,200	27,500
201	Meat Products	10.0%	9.3%	10.4%	10.9%	11.2%
202	Dairy Products	18.5	18.0	16.4	18.1	19.1
203	Preserved Fruits & Vegetables	5.1	5.9	6.8	5.2	5.7
204	Grain Mill Products	1.8	1.8	2.3	1.8	1.7
205	Bakery Products	23.1	21.4	20.0	19.3	17.6
206	Sugar & Confectionary Prod.	13.1	14.6	13.5	13.8	13.8
207	Fats and Oil	1.2	1.2	1.2	1.2	1.1
208	Beverages	10.3	10.3	10.0	9.0	9.3
209	Misc. Food & Kindred Prod.	17.0	17.5	19.5	20.6	20.5
22	Textile Mill Products	27,700	27,900	28,200	26,300	23,100
221	Weaving Mills, Cotton	1.5%	1.6%	1.7%	1.1%	1.5%
222	Weaving Mills, Synthetics	11.6	13.0	14.2	15.6	13.2
223	Weaving Mill, Wool	8.3	8.6	8.7	8.8	7.6
224	Narrow Fabric Mills	6.1	4.9	5.1	5.4	5.4
225	Knitting Mills	20.0	21.7	22.7	23.4	20.2
226	Textile Furnishings, exc. Wool	23.0	21.4	21.6	19.7	21.3
227	Floor Covering Mills	0.4	0.4	0.4	0.5	0.5
228	Yarn and Thread Mills	7.7	8.0	7.4	7.2	7.6
229	Misc. Textile Goods	21.5	20.2	18.1	18.3	22.7
23	Apparel	43,200	42,800	42,100	40,700	39,300
231	Men's & Boys' Suits and Coats	10.2%	11.8%	10.9%	11.3%	11.1%
232	Men's & Boys' Furnishings	11.9	11.2	11.8	11.3	11.3
233	Women's & Misses' Outerwear	41.0	41.7	41.7	43.5	44.4
234	Women's & Misses' Undergarments	7.0	7.4	7.3	7.2	7.4
235	Hats, Caps, & Millinery	1.1	1.0	0.8	0.7	0.7
236	Children's Outerwear	3.4	3.1	2.9	1.9	1.6
238	Misc. Apparel & Access.	7.1	7.1	7.2	7.3	6.9
239	Misc. Fabricated Textiles	18.2	16.8	17.5	16.8	16.5
24	Lumber & Wood Products	4,900	5,200	5,400	5,400	5,100
241	Logging Camps	1.1%	0.9%	1.8%	1.8%	1.9%
242	Sawmills & Planning Mills	13.8	12.5	13.3	15.1	14.6
243	Millwork, Plywood & Rel.	26.0	24.4	24.9	26.4	29.0
244	Wood Containers	13.8	13.0	12.1	12.6	11.9
245	Wood Building & Mobile Homes	4.8	4.6	4.3	2.7	2.8
249	Misc. Wood Products	40.5	44.6	43.5	41.3	39.8

Table 8

Massachusetts Private Industrial Employment
and
Percent Distribution of Subsectors
(continued)

		1976	1977	1978	1979	1980 1/
25	Furniture & Fixtures	8,200	8,400	8,700	8,400	7,800
251	Household Furniture	80.7%	79.7%	75.9%	71.9%	66.1%
252	Office Furniture	0.5	0.7	5.7	8.4	10.8
253	Public Building Furniture	2.4	2.3	2.5	2.5	3.3
254	Partitions & Fixture	13.8	14.4	13.7	14.2	16.6
259	Misc. Furniture Fixtures	2.6	2.7	2.3	3.1	3.3
26	Paper & Allied Products	28,900	29,400	30,400	29,800	27,300
262	Paperboard Mills, exc. Bldg. Paper	22.4%	21.4%	21.5%	20.7%	20.4%
263	Paperboard Mills	4.3	4.3	4.3	4.3	4.0
264	Misc. Converted Paper Prod.	42.9	43.9	44.7	45.2	45.9
265	Paperboard Containers & Boxes	30.3	30.2	28.9	29.2	29.2
266	Building Paper & Board Mills	2/	2/	0.6	0.6	0.4
27	Printing, Publishing and Allied Products	41,000	42,200	42,900	43,000	43,400
271	Newspapers	31.7%	31.5%	31.3%	30.7%	30.2%
272	Periodicals	3.3	3.6	4.1	3.7	3.6
273	Books	14.9	13.4	12.8	13.9	13.7
274	Misc. Publishing	1.9	2.0	1.9	1.6	1.9
275	Commercial Printing	30.2	31.2	31.3	32.3	33.0
276	Manifold Business Forms	1.2	1.4	1.4	1.5	1.4
277	Greeting Cards	3.1	3.4	3.1	2.5	2.5
278	Blankbooks and Bookbinding	11.1	11.2	12.0	11.6	11.4
279	Printing Trade Services	2.6	2.4	2.1	2.3	2.3
28	Chemicals & Allied Products	18,400	17,300	17,700	18,200	17,700
281	Indust. Inorganic Chemicals	6.4%	5.6%	7.0%	5.6%	5.6%
282	Plastic Materials & Synthetics	31.8	32.8	30.8	30.9	31.2
283	Drugs	11.3	11.9	12.9	14.8	15.1
284	Soap, Cleaners & Toilet Goods	18.3	17.9	17.3	16.3	14.8
285	Paints & Allied Products	7.0	6.6	7.1	7.2	7.9
286	Indust. Organic Chemicals	2.7	2.8	3.1	2.9	3.1
287	Agricultural Chemicals	2.1	2.1	2.2	2.2	2.1
289	Misc. Chemical Products	20.4	20.1	19.6	20.0	20.3

Table 8
Massachusetts Private Industrial Employment
and
Percent Distribution of Subsectors
(continued)

		1976	1977	1978	1979	1980 1/
30	Rubber & Misc. Plastic Prod.	29,600	30,200	32,100	31,700	29,400
301	Tires & Inner Tires	6.6%	7.8%	7.1%	6.0%	3.2%
302	Rubber & Plastic Footwear	7.2	3.0	2.1	3.6	3.0
306	Fab. Rubber Prod. n.e.c.	23.0	22.1	22.0	23.2	19.8
307	Misc. Plastic Products	63.1	67.3	68.7	66.9	72.0
32	Stone, Clay and Glass Prod.	11,200	11,300	13,200	13,900	13,400
321	Flat Glass	0.3%	0.5%	0.6%	0.5%	0.5%
322	Glass & Glassware, Pressed or Blown	10.1	11.3	10.9	10.1	9.0
323	Products of Purchased Glass	3.0	2.9	2.6	2.5	2.4
325	Structural Clay Products	1.7	1.2	1.0	1.4	1.5
327	Concrete Gypsum and Plastic Products	22.3	20.8	21.2	21.3	23.1
328	Cut Stone & Stone Products	4.8	4.5	3.7	2.5	2.9
329	Misc. Nonmetallic Mineral Prod.	55.4	56.6	58.4	60.3	59.0
33	Primary Metal Industries	13,400	14,400	17,000	17,500	16,800
331	Blast Furnace & Basic Steel Products	24.0%	20.8%	15.9%	15.7%	15.3%
332	Iron & Steel Foundaries	15.1	13.4	11.5	11.1	11.8
333	Primary Nonferrous Metals	3.5	2.6	2.1	2.1	2.5
334	Secondary Nonferrous Metals	2.2	2.0	1.7	1.4	1.9
335	Nonferrous Rolling & Drawing	41.1	43.0	53.6	52.6	50.1
336	Nonferrous Foundries	9.0	11.1	10.7	12.5	12.9
339	Misc. Primary Metal Products	4.7	7.1	4.6	4.6	5.5
34	Fabricated Metal Products	50,400	51,800	53,200	54,300	52,200
341	Metal Cans & Containers	2.0%	2.3%	2.0%	2.1%	2.1%
342	Cutlery, Hand Tools, & Hdwre.	25.4	25.6	25.1	23.8	22.6
343	Plumbing & Heating, Nonelec.	2.4	2.2	2.5	2.6	3.0
344	Structural Metal Products	18.2	17.2	17.6	17.3	18.0
345	Screw Machine Prod., Bolts	7.4	7.4	7.2	7.3	6.6
346	Metal Forgings & Stampings	11.4	11.4	11.4	12.1	12.2
347	Metal Services n.e.c.	7.7	7.7	7.5	8.0	7.8
348	Ordnance & Accessories	9.1	9.5	9.2	9.3	10.6
349	Misc. Fabricated Metal Prod.	16.4	16.7	17.5	17.5	17.2

Table 8
Massachusetts Private Industrial Employment
and
Percent Distribution of Subsectors

(continued)

		1976	1977	1978	1979	1980 1/
35	Machinery, Except Electrical	74,000	82,000	90,400	103,000	108,400
351	Engines and Turbines	8.9%	7.5%	6.6%	5.7%	5.9%
352	Farm Machinery	2/	2/	2/	2/	2/
353	Construction & Rel. Machinery	1.4	1.2	1.1	1.1	0.9
354	Metal Working Machinery	19.6	19.4	18.6	17.7	16.9
355	Special Industrial Mach.	20.7	19.0	18.8	17.3	15.2
356	Gen. Industrial Machinery	10.2	9.9	9.8	8.9	8.6
357	Office, Computing & Accounting	28.9	33.0	34.8	38.5	42.3
358	Service Industry Machinery	2.6	2.7	2.6	2.5	2.3
359	Misc. Machinery exc. elec.	7.6	7.0	7.6	8.4	7.9
36	Electric & Electronic Equip.	83,800	91,000	98,300	104,100	111,700
361	Elec. Dist. Equipment	15.0%	13.1%	6.1%	5.4%	4.9%
362	Elec. Indust. Apparatus	2.9	2.9	5.9	6.0	4.8
363	Household Appliances	1.6	1.4	1.3	1.4	1.1
364	Elec. Lighting & Wiring Equip.	9.8	10.1	10.3	10.0	7.1
365	Radio & TV Receiving Equip.	4.1	4.0	4.1	2.8	2.4
366	Communications Equipment	28.7	26.7	27.7	28.3	30.5
367	Elec. Components & Access.	34.2	37.8	39.9	43.0	44.0
369	Misc. Elec. Equip. & Supplies	3.7	4.0	4.7	5.1	5.2
37	Transportation Equipment	30,200	33,200	36,400	37,000	34,200
371	Motor Vehicles Equipment	14.7%	16.7%	17.3%	17.0%	16.1%
372	Aircraft and Parts	25.3	25.4	25.1	27.6	31.4
373	Ship & Boat Building	21.4	19.9	22.0	20.6	17.0
376	Guided Missiles & Space	36.2	35.6	33.4	32.7	34.0
379	Misc. Transportation Equip.	0.6	0.5	0.4	0.3	0.4
38	Measuring & Controlling Instruments	45,100	51,500	56,700	57,800	56,700
381	Engineering & Scientific Inst.	4.1%	5.7%	5.5%	5.7%	7.1%
382	Measuring & Contr. Inst.	31.8	32.1	30.9	31.4	35.6
383	Optical Instr. & Lenses	10.6	10.3	9.9	10.9	10.9
384	Med. Instr. & Supplies	10.1	10.5	11.8	11.2	11.4
385	Opthalmic Goods	12.9	11.8	10.8	12.2	10.2
386	Photographic Equipment and Supplies	27.0	26.1	28.5	26.3	22.6
387	Watches, Clocks, & Watch Cases	3.6	3.4	2.6	2.4	2.1

Table 8
Massachusetts Private Industrial Employment
and
Percent Distribution of Subsectors

(continued)

		1976	1977	1978	1979	1980 1/
	Misc. Manufacturing	25,400	26,900	27,800	28,800	28,300
21	Tobacco Manufacturing	0.3%	0.1%	2/	2/	2/
29	Petroleum Refining	4.8	5.3	5.3	6.0	5.6
30	Manufacturing Ind. n.e.c.	94.9	94.6	94.6	94.0	94.4
	Construction	71,700	66,400	72,700	77,200	83,000
15	Building Construction	24.5%	25.7%	28.7%	28.0%	27.9%
16	General Construction	18.3	18.0	11.9	10.9	10.7
17	Special Trade Contractors	57.3	57.2	59.5	61.1	61.4
	Transportation and Public Utilities	112,800	114,900	117,300	115,500	114,800
41	Passenger Transit	13.8%	13.5%	13.6%	13.7%	11.6%
42	Trucking & Warehousing	23.8	24.4	24.9	24.3	23.2
44	Water Transportation	2.0	2.3	2.2	2.0	2.5
45	Air Transportation	7.0	7.3	7.6	8.4	8.8
47	Transportation Services	3.7	3.8	4.0	4.5	4.7
48	Communications	32.5	32.0	31.5	31.4	33.0
49	Electric, Gas & Sanitary Svc.	17.2	16.8	16.3	15.7	16.3
	Wholesale & Retail Trade	520,200	533,500	547,100	567,400	575,600
50	Wholesale - Durable Goods	11.7%	12.0%	11.6%	12.0%	12.2%
51	Wholesale Nondurable Goods	10.8	10.5	10.3	10.6	10.8
52	Building Materials, Hardware Mobile Homes	2.4	2.4	2.3	2.4	2.4
53	General Merchandise	10.8	10.6	10.7	10.2	9.7
54	Food Stores	14.7	14.4	13.8	13.5	13.0
55	Automotive Dealers & Gas Stations	8.0	8.0	7.9	7.3	6.8
56	Apparel & Access. Stores	5.5	5.4	5.7	5.8	5.8
57	Furniture & Home Furnishings	2.9	2.7	2.9	2.7	2.6
58	Eating & Drinking Places	22.4	23.0	23.8	24.3	25.6
59	Miscellaneous Retail	10.8	10.8	11.2	11.2	11.2

1/ Distribution based on September, 1980

2/ Percent was less than 0.0

Source: Current Employment Series DES, ES-202

Table 9
Production Employment as Percent Of
Manufacturing Employment
Massachusetts
April 1981

Industry Title	All Employees (000's)	Production Workers (000's)	Production As Percent Of Total Industry Employment	Percent Change In Employment Over the Year
Manufacturing - Total	671.7	442.1	65.8	- 1.8
Durable Goods - Total	413.3	254.2	61.5	- 0.5
Lumber & Furniture	13.9	10.8	77.7	+ 2.2
Stone, Clay & Glass	12.7	8.2	64.5	- 4.5
Primary Metals	17.0	13.4	78.8	- 6.6
Fabricated Metals	53.0	37.6	70.9	- 4.2
Cutlery, Hand Tools	12.8	8.6	67.2	- 1.5
Other Fabricated	40.2	--	--	--
Machinery exc. Electrical	111.5	65.1	58.4	+ 1.5
Metalwork Machinery	16.9	12.4	73.4	- 6.6
Spec. Ind. Machinery	15.8	9.1	57.6	- 8.7
Office & Computing Mach.	50.4	24.4	48.4	+10.3
Other Mach., exc. elec.	28.4	--	--	--
Electric & Electronic Equip.	112.2	66.5	59.3	+ 0.9
Communications Equip.	34.5	16.6	48.1	+ 8.5
Electronics Components	48.9	29.6	60.5	+ 0.2
Other Elec. Equip.& Supply	28.8	--	--	- 5.9
Transportation Equipment	33.9	18.6	54.9	- 6.6
Instruments	59.1	34.0	57.5	+ 2.4
Measuring & Control	20.1	11.7	58.2	+ 5.2
Other Ind. & Related	39.0	--	--	+ 1.0
Nondurable Goods-Total	258.4	187.9	72.7	- 3.9
Food & Kindred Products	26.0	15.8	60.8	- 2.3
Textile Mill Products	25.3	19.9	78.6	- 6.7
Apparel	39.7	35.3	88.9	- 1.0
Men's & Boys' Suits	8.9	4.2	47.2	- 2.2
Misc. Fabricated	6.3	5.2	82.5	- 8.7
Other Apparel & Textiles	24.5	--	--	+ 1.7
Paper and Allied Products	28.5	20.7	72.6	- 3.4
Paper Mills exc. Bldg.	6.1	--	--	- 1.6
Paperboard Containers	8.1	6.3	77.8	- 2.4
Other Paper & Allied Prod.	14.3	--	--	--
Printing and Publishing	43.0	26.0	60.7	- 3.2
Chemicals	17.8	10.3	57.9	- 3.8
Rubber & Misc. Products	30.6	23.6	77.1	- 3.2
Misc. Plastics Products	21.8	17.1	78.4	- 3.5
Other Rubber & Plastics	8.8	--	--	-10.2
Leather & Leather Products	20.2	16.5	81.7	- 7.8
Footwear exc. Rubber	11.5	9.2	80.0	-11.5
Miscellaneous Manufacturing	26.1	18.0	68.9	- 4.0
Jewelry	8.7	6.2	71.3	- 3.3

Source: BLS 790

Table 10
Massachusetts Projected Employment
By Industry
Federal Fiscal Years 1980-1982 1/
May 1981
(in 000's)

Industry	FFY 1980	FFY 1981 2/	FFY 1982 3/
Nonagricultural Wage & Salary Employment-Total	2642.2	2679.1	2731.1
Manufacturing	675.7	669.1	681.6
Durable Goods	409.5	410.8	425.1
Lumber	5.1	5.1	5.1
Furniture	8.3	8.7	8.8
Stone, Clay, Glass	13.3	12.8	12.8
Primary Metals	17.5	16.8	17.5
Fabricated Metals	54.6	53.1	54.1
Nonelectrical Machinery	108.3	110.9	115.1
Electrical Machinery	108.9	111.2	118.1
Transportation Equip.	35.9	33.4	32.5
Instruments	57.5	58.9	61.1
Nondurable Goods	266.2	258.3	256.5
Food	27.7	26.8	26.6
Textiles	25.9	24.6	24.2
Apparel	39.8	39.8	39.9
Paper	29.2	28.4	28.2
Printing	44.1	43.1	42.3
Chemicals	18.3	17.9	18.2
Rubber	31.5	30.1	29.5
Leather	21.2	20.0	19.9
Other Nondurables	28.4	27.6	27.7
Nonmanufacturing	1966.6	2009.9	2049.5
Construction	74.8	74.3	81.7
Transportation and Utilities	122.0	124.8	125.2
Wholesale and Retail Tr.	570.7	579.2	594.0
Finance, Insurance and Real Estate	157.6	162.5	165.4

Table 10
Massachusetts Projected Employment
By Industry
Federal Fiscal Years 1980-1982 1/
May 1981
(in 000's)
(continued)

Industry	FFY 1980	FFY 1981 2/	FFY 1982 3/
Nonmanufacturing (continued)			
Services and Misc.	629.2	664.8	690.1
Government	412.3	404.3	393.1
Federal	58.5	57.5	56.0
State	97.3	98.6	96.6
Local	256.5	248.2	240.5

1/ Some data may not add due to rounding.
A Federal Fiscal Year begins on October 1st and ends the following September 30th.

2/ Projection based on actual data for seven months and estimated for five months.

3/ Projected.

Sources: Current Employment Series of the Massachusetts Division of Employment Security in cooperation with the U. S. Department of Labor, Bureau of Labor Statistics.
Massachusetts Economic Policy Analysis (MEPA) Model Forecast by George Treyz and Roy Williams.

Labor Area Research Department, DES.

Table 11
Manufacturing Employment in Massachusetts
As a Percent of U.S. Employment
Federal Fiscal Years 1980-1982 1/

	FFY 1980	FFY 1981 2/	FFY 1982 3/
Manufacturing (SIC Codes in Parentheses)	3.29	3.28	3.30
Durable Goods	3.31	3.36	3.41
Lumber (24)	0.72	0.74	0.72
Furniture (25)	1.73	1.80	1.80
Stone, Clay, Glass (32)	1.96	1.94	1.95
Primary Metals (33)	1.51	1.49	1.53
Fabricated Metals (34)	3.30	3.27	3.23
Nonelectrical Machinery (35)	4.36	4.43	4.49
Engines & Turbines(351)	4.58	4.80	4.84
Metalworking Mach.(354)	4.77	4.52	4.38
Special Industry Mach. (355)	8.21	7.58	7.36
General Indust. Mach. (356)	2.93	2.71	2.63
Office & Comp. Mach.(357)	10.58	10.99	11.59
Rest of Industry Group	1.23	1.28	1.34
Electrical Machinery (36)	5.10	5.15	5.36
Electronic Comp. (367)	8.51	8.57	8.89
Rest of Industry Group	3.91	3.95	4.03
Transportation Equip.(37)	1.86	1.79	1.75
Motor Vehicles and Parts (371)	0.80	0.74	0.77
Aircraft and Parts(372)	1.57	1.49	1.45
Rest of Industry Group	4.12	4.10	4.02
Instruments (38)	8.23	8.41	8.71
Measuring and Controlling (382)	7.96	8.43	8.74
Rest of Industry Group	8.37	8.40	8.70

Table 11
Manufacturing Employment in Massachusetts
As a Percent of U.S. Employment
Federal Fiscal Years 1980-1982 1/
(continued)

	FFY 1980	FFY 1981 2/	FFY 1982 3/
Nondurables	3.25	3.16	3.12
Food (20)	1.63	1.59	1.58
Textiles (22)	2.97	2.87	2.82
Apparel (23)	3.06	3.05	3.00
Paper (26)	4.18	4.09	4.03
Printing (27)	3.48	3.34	3.28
Chemicals (28)	1.64	1.61	1.61
Rubber (30)	4.36	4.21	4.20
Leather (31)	8.79	8.27	8.11
Other Nondurables	6.61	6.61	6.50

1/ A Federal Fiscal Year begins on October 1st and ends the following September 30th.

2/ Based on actual data for seven months and estimated for five months.

3/ Projected.

Source: Massachusetts Economic Policy Analysis (MEPA) Model Forecast by George Treyz and Roy Williams

IV. Employment Developments and Outlook by Occupation

A. Employment Trends

This section contains information on the occupations of employed persons and the distribution of occupations by age and sex. For the last several years, the Bureau of Labor Statistics has provided Massachusetts with an estimated annual occupational profile of the state's work force. Unfortunately, this profile is subject to considerable sampling error due to the size of the survey. The Current Population Survey (CPS) has a sample of approximately 1,600 households in Massachusetts. This number is not large enough to compensate for the fluctuations in statistical accuracy when the sample total is broken out into its component parts. Nevertheless, the CPS occupational profile does provide useful information on changes in the composition of the state's employment.

Table 12 provides data on the 1978, and 1980 employed in Massachusetts by their occupational category for 1976, and 1980. The table illustrates that the majority of women have white collar jobs, although their distribution in this sector is uneven. Women are well represented in professional and technical positions, but they are only one-quarter of the managers and administrators and compose three-quarters of the clerks. The only blue collar occupation in which women are a significant segment is as operatives, whereas women hold over half the service jobs.

Employed youth (16-19) are rather evenly distributed among the occupations. However, because young people lack experience, and in many cases job training as well, they tend to occupy the lower paid entry positions in each category.

An occupational distribution of employed persons in Massachusetts and the United States is in Table 14. A quick observation shows that women are more active in the labor force here than nationally, and that we have proportionally fewer minorities. The data also points out that women in Massachusetts occupy a greater percentage of the white collar jobs than their counterparts nationally. Also women in Massachusetts are more likely to have a blue collar job in a craft or operative occupation than women nationally.

The state's occupational distribution of female workers generally follows national trends for sales workers, clerical workers, and service workers.

Table 12
Massachusetts Employed Persons 1980, 1978, 1976
16+ By Occupation
(in 000's)

Occupation	Both Sexes			Male			Female			Youth 16-19 Both Sexes		
	1980	1978	1976	1980	1978	1976	1980	1978	1976	1980	1978	1980
TOTAL	2731.0	2663.0	2499.0	1538.0	1522.0	1472.0	1193.0	1141.0	1028.0	234.0	244.0	234.0
White Collar Workers	1506.0	1441.0	1337.0	711.0	704.0	662.0	796.0	737.0	675.0	NA	83.0	78.0
Prof., & Tech. Wkrs.	511.0	488.0	462.0	283.0	274.0	261.0	228.0	214.0	201.0	--	7.0	7.0
Managers & Admintrs.	315.0	278.0	252.0	225.0	224.0	206.0	91.0	54.0	46.0	--	3.0	3.0
Sales Workers	161.0	159.0	149.0	91.0	91.0	88.0	70.0	68.0	61.0	--	24.0	24.0
Clerical Workers	519.0	516.0	474.0	112.0	115.0	107.0	406.0	401.0	367.0	--	51.0	45.0
Blue Collar Workers	837.0	838.0	799.0	644.0	638.0	626.0	193.0	199.0	173.0	NA	86.0	78.0
Craft & Kindred Wkrs.	326.0	308.0	314.0	305.0	289.0	301.0	21.0	19.0	13.0	--	17.0	11.0
Operatives ex. Transp.	329.0	339.0	310.0	172.0	177.0	169.0	156.0	161.0	140.0	--	36.0	30.0
Transportation Equip.	75.0	82.0	64.0	69.0	75.0	60.0	5.0	7.0	4.0	--	3.0	4.0
Nonfarm Laborers	107.0	109.0	111.0	97.0	97.0	96.0	10.0	12.0	15.0	--	27.0	32.0
Service Workers	380.0	375.0	352.0	178.0	172.0	175.0	202.0	203.0	177.0	NA	73.0	76.0
Private Households	--	15.0	22.0	--	1.0	1.0	--	14.0	21.0	--	4.0	11.0
Other Services	--	359.0	330.0	--	172.0	174.0	--	188.0	156.0	--	69.0	64.0
Farm Workers	8.0	10.0	11.0	5.0	7.0	9.0	4.0	2.0	2.0	NA	1.0	2.0
Farmers & Managers	--	3.0	3.0	--	2.0	2.0	--	1.0	0.0	--	0.0	0.0
Farm Laborers & Supvs.	--	7.0	8.0	--	5.0	6.0	--	2.0	2.0	--	1.0	2.0

Source: 1978 and 1976 Geographic Profile of Employment and Unemployment - U. S. Dept. of Labor, Bureau of Labor Stat.
1980 data is from the draft copy of the same report
Numbers do not add due to rounding

Table 13
Occupational Distribution of Employment
Massachusetts Annual Averages
1975-1980
(in Percents)

	Both Sexes						Males					
	1980	1979	1978	1977	1976	1975	1980	1979	1978	1977	1976	1975
TOTAL ALL WORKERS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total White Collar Workers	55.1	55.0	54.1	53.0	53.0	55.3	46.2	46.3	46.2	44.5	45.0	47.2
Professional & Technical	18.7	18.2	18.3	18.4	18.5	19.2	18.4	18.2	18.0	17.2	17.7	19.0
Managers & Administrators	11.5	11.0	10.4	9.9	10.1	9.9	14.6	14.5	14.7	14.0	14.0	14.1
Sales Workers	5.9	6.0	6.0	5.9	6.0	6.7	5.9	5.8	6.0	6.0	6.0	6.8
Clerical Workers	19.0	19.8	19.4	18.9	19.0	19.5	7.3	7.8	7.6	7.3	7.3	7.3
Total Blue Collar Workers	30.6	30.4	31.5	32.5	32.0	30.2	41.9	41.8	41.9	44.0	42.5	41.5
Craft & Kindred Workers	11.9	12.2	11.6	12.0	12.6	12.8	19.8	20.5	19.0	19.9	20.4	20.9
Operatives exc. Transp.	12.0	11.9	12.7	12.9	12.4	11.2	11.2	11.2	11.7	12.2	11.5	10.6
Transportation Operatives	2.7	2.8	3.1	3.2	2.6	2.6	4.5	4.5	4.9	5.0	4.1	4.2
Nonfarm Laborers	3.9	3.6	4.1	4.5	4.4	3.6	6.3	5.6	6.4	6.8	6.5	5.7
Service Workers	13.9	14.2	14.1	14.1	14.1	14.2	11.6	11.3	11.3	11.1	11.9	10.9
Farm Workers	0.3	NA	0.4	NA	NA	0.3	0.3	NA	0.5	NA	NA	0.5

Source: 1979, 1978, 1977, 1976, 1975 Geographic Profile of Employment and Unemployment
U. S. Department of Labor, Bureau of Labor Statistics
1980 data is from the draft copy of the same report

Table 14

Occupational Distribution - Massachusetts and United States
1978-EEO-1 Report Summaries
For Massachusetts and United States*

Race and Sex	Total Employment		White Collar											
			Total		Officials and Managers		Professionals		Technicians		Sales Workers		Clerical	
	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.
TOTAL BOTH SEXES.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Males.....	56.2	60.0	50.0	50.8	81.5	82.7	62.1	66.1	59.8	62.5	48.3	49.3	17.4	17.8
Total Females.....	43.8	40.0	50.0	49.2	18.5	17.3	37.9	33.9	40.2	37.5	51.7	50.7	82.6	82.2
White Total.....	92.0	82.1	94.5	88.2	96.3	93.1	95.2	90.8	92.9	86.2	94.5	88.5	93.4	84.0
White Males.....	51.9	49.9	47.5	46.1	78.8	77.6	59.0	60.9	55.9	55.4	45.4	44.2	16.1	14.6
White Females.....	40.2	32.2	47.0	42.1	17.6	15.5	36.2	29.9	37.0	30.7	49.1	44.3	77.2	69.4
Minority Total.....	8.0	17.9	5.5	11.8	3.7	6.9	4.8	9.2	7.1	13.8	5.5	11.5	6.6	16.0
Minority Males.....	4.3	10.1	2.6	4.7	2.8	5.1	3.1	5.2	4.0	7.1	2.9	5.0	1.3	3.2
Minority Females.....	3.7	7.8	2.9	7.0	0.9	1.8	1.8	4.0	3.2	6.7	2.6	6.4	5.3	12.8
Black Total.....	4.7	11.2	3.4	6.8	2.1	3.7	2.3	4.0	4.4	8.2	3.3	6.8	4.8	10.1
Black Males.....	2.3	6.1	1.4	2.4	1.5	2.6	1.3	1.9	2.3	3.5	1.6	2.8	0.9	1.9
Black Females.....	2.3	5.1	2.1	4.4	0.6	1.1	1.0	2.1	2.1	4.7	1.7	4.0	4.0	8.2
Spanish Surnamed Americans Total.....	2.5	5.0	1.1	3.1	1.0	2.0	0.7	1.8	1.2	3.3	1.6	3.4	1.1	4.1
Spanish Surnamed American Males..	1.5	3.1	0.6	1.4	0.8	1.6	0.5	1.2	0.7	2.1	1.0	1.6	0.3	0.9
Spanish Surnamed American Females	1.0	1.9	0.5	1.7	0.2	0.5	0.2	0.6	0.5	1.2	0.6	1.8	0.8	3.2
Oriental & Pacific Islanders Total....	0.7	1.3	0.9	1.6	0.4	0.8	1.7	3.2	1.4	2.0	0.4	0.9	0.6	1.5
Oriental & Pacific Islander Males	0.4	0.7	0.5	0.8	0.3	0.6	1.2	2.0	0.9	1.2	0.2	0.5	0.1	0.4
Oriental & Pacific Islander Females	0.3	0.6	0.4	0.8	0.1	0.2	0.5	1.2	0.6	0.8	0.2	0.4	0.5	1.1
American Indians Total.....	0.1	0.4	0.1	0.3	0.2	0.4	0.1	0.2	0.1	0.4	0.1	0.3	0.1	0.4
American Indian Males.....	0.1	0.3	0.1	0.2	0.1	0.3	0.1	0.2	0.1	0.2	0.1	0.2	**	0.1
American Indian Females.....	**	0.1	**	0.2	**	0.1	**	0.1	**	0.1	**	0.1	0.1	0.3

Occupational Distribution - Massachusetts and United States
1978-EEO-1 Report Summaries
For Massachusetts and United States*
(continued)

Race and Sex	Blue Collar									
	Total		Craft Workers		Operatives		Laborers		Service Workers	
	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.	Mass.	U. S.
TOTAL - BOTH SEXES.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Males.....	69.6	74.7	85.9	91.4	63.4	68.1	57.9	66.1	45.7	45.4
Total Females.....	30.4	25.3	14.1	8.6	36.6	31.9	42.1	33.9	54.3	54.6
White Total.....	89.9	77.5	93.9	86.2	88.7	76.1	86.2	68.2	85.3	69.4
White Males.....	63.3	59.0	81.1	79.5	56.6	52.6	50.1	44.7	38.5	30.4
White Females.....	26.6	18.5	12.8	6.7	32.1	23.5	36.1	23.5	46.8	38.9
Minority Total.....	10.1	22.5	6.1	13.8	11.3	23.9	13.8	31.8	14.7	30.6
Minority Males.....	6.3	15.6	4.8	11.8	6.8	15.5	7.9	21.3	7.2	15.0
Minority Females.....	3.8	6.9	1.3	1.9	4.5	8.4	5.9	10.4	7.5	15.7
Black Total	5.1	14.3	3.3	8.0	5.7	16.1	6.6	19.1	10.3	21.5
Black Males.....	3.2	9.9	2.7	6.9	3.4	10.5	3.6	12.8	4.8	9.8
Black Females.....	1.8	4.4	0.5	1.1	2.3	5.7	3.0	6.3	5.5	11.7
Spanish Surnamed Americans.....	4.5	6.9	2.5	4.7	5.0	6.5	6.6	11.1	3.4	7.0
Sp. Surnamed Americans Male...	2.8	4.9	1.8	4.1	3.1	4.3	4.0	7.6	1.9	4.1
Sp. Surnamed Americans Female..	1.7	2.0	0.7	0.6	1.9	2.2	2.6	3.5	1.5	2.9
Oriental & Pacific Islander Total .	0.4	0.8	0.2	0.6	0.5	0.8	0.4	1.0	0.8	1.7
Oriental & Pacific Islander Males	0.2	0.4	0.2	0.5	0.2	0.4	0.2	0.5	0.4	0.8
Oriental & Pacific Islander Females	0.2	0.3	0.1	0.1	0.3	0.4	0.3	0.5	0.4	0.9
American Indian Total	0.1	0.5	0.1	0.5	0.1	0.5	0.2	0.6	0.2	0.4
American Indian Males.....	0.1	0.4	0.1	0.4	0.1	0.3	0.1	0.4	0.1	0.2
American Indian Females.....	**	0.1	**	**	**	0.1	0.1	0.2	0.1	0.2

* Private Employers with at least 100 employees.
** Less than 0.05 percent.
Source: Survey Branch, Office of Program Planning and Evaluation, Equal Opportunity Commission.
Sample: Nationwide - 38,993 units, Massachusetts -4,599 units, 2,089 employers. The total employment figure nationwide was 36,028,647, for Massachusetts 989,913.

Table 15
Full and Part-time Status
Massachusetts Labor Force
Annual Averages
(in 000's)

Year	Full-time Labor Force					Part-time Labor Force			
		Employed		Unemployed (Looking for Full-time Work)			Employed Voluntarily Employed Part-time	Unemployed (Looking for Part-time Work)	
	Total	Full-time Schedules	Part-time for Economic Reasons	Number	Percent of Full-time Labor Force	Total		Number	Percent of Part-time Labor Force
1980	2399.0	2182.0	92.0	125.0	5.2	495.0	457.0	38.0	7.6
1979	2250.0	2065.0	83.0	102.0	4.6	504.0	456.0	48.0	9.6
1978	2338.0	2121.0	92.0	126.0	5.4	497.0	450.0	47.0	9.4
1977	2287.0	2018.0	98.0	171.0	7.5	493.0	439.0	54.0	11.0
1976	2258.0	1957.0	97.0	204.0	9.0	505.0	446.0	59.0	11.6
1975	2229.0	1881.0	99.0	248.0	11.1	506.0	449.0	57.0	11.2

Source: 1979, 1978, 1977, 1976, 1975 Geographic Profile of Employment and Unemployment.
U. S. Department of Labor
Bureau of Labor Statistics
1980 data is from the draft copy of the same report.

B. Employment Projections by Occupation

The occupational projections which appear in this section are from Employment Requirements by Occupation, by Industry 1976-1985. This publication was prepared by the Occupation/Industry Research Department of the Massachusetts Division of Employment Security. The projections were made following procedures outlined in BLS Bulletin 1606, the methodology is fully explained in the report. *

During the course of the nine years projected, approximately one and a quarter million job openings will occur in the state. Some 423,000 of these job openings will be due to growth -- about one-third of the total. The rest will be needed as replacements.

The greatest absolute changes are expected in the clerical, service and professional occupations. The greatest percentage increases are projected for clerical workers, service workers, and managers. Above average job openings due to growth are seen for clerical workers, professionals and crafts workers.

In 1981 the Executive Office of Economic Affairs issued a report titled 50 High Demand Occupations In Massachusetts-1981. This work was a joint effort by the economists of the Division of Employment Security, the Department of Manpower Development, and the Massachusetts Occupational Information Coordinating Committee. This report's purpose is to provide information which will help individuals considering a job or career change to make informed choices. We have reprinted two indices from the report for reader convenience. The first is an alphabetical index of High Demand Occupations in Massachusetts. The second lists these occupations by their major occupational clusters.

* The information in the report should be used as indicators of trend, relative magnitude and probable direction rather than a specific forecasts of actual employment levels. The information should also be used in conjunction with other data prepared by this agency and other public and private organizations - for example, the series on Vocational Education and Workforce Planning prepared by the Labor Area Research Department. It should be noted that the projections are based on 1976 industry employment.

Table 16

Massachusetts Employment by Occupation
1976 and Projected 1985

Occupational Title	Employment			Annual Labor Demand 1976 - 1985				
			Net Changes	Average Annual	Openings Due to Growth		Openings Due To Separations	
	1976	1985	1976-1985	Openings	Number	percent	Number	Percent
Total - All Occupations	2,450,430	2,873,240	422,810	142,370	46,980	33.0	95,390	67.0
Prof., Tech., Kindred	434,650	500,960	66,320	20,470	7,310	35.7	13,160	64.3
Managers	260,570	309,470	48,900	16,490	5,430	32.9	11,060	67.1
Sales Workers	154,030	179,880	25,850	10,400	2,870	27.6	7,530	72.4
Clerical Workers	469,510	581,830	112,320	32,390	12,480	38.5	19,910	61.5
Crafts & Kindred Workers	289,810	334,480	44,670	14,140	4,960	35.1	9,180	64.9
Operatives	378,220	424,900	46,680	18,900	5,200	27.5	13,700	72.5
Service Workers	342,020	414,160	72,140	24,910	8,010	32.2	16,900	67.8
Laborers except Farm	98,380	108,940	10,560	4,000	1,170	29.3	2,830	70.7

Summed parts may not equal totals because of rounding. Data for Farmers and Farm Workers not listed.

Source: Employment Requirements by Occupation, by Industry 1976-1985.

Index 1

Annual Labor Demand

Massachusetts 1976 - 1985, Openings Due to Growth
(Occupations Whose Annual Openings Due to Growth Will Exceed 200)

Rank	Occupation	Number of Openings
1.	Secretaries (General).....	3,410
2.	Sales Clerks	2,200
3.	Cashiers.....	1,050
4.	Waiters and Waitresses.....	760
5.	Nurses Aides.....	730
6.	Cooks.....	670
7.	Electronics Technicians.....	570
8.	Carpenters.....	560
9.	Bookkeepers.....	490
10.	Child Care Workers.....	460
11.	Clerk-Typists.....	460
12.	Typists.....	460
13.	Secretaries (Medical).....	450
14.	Drafters.....	360
15.	Plumbers and Pipefitters.....	360
16.	Food Workers.....	350
17.	Real Estate Agents & Brokers.....	330
18.	Construction Workers.....	320
19.	Air Conditioning, Heating, and Refrigeration Mechanics.....	300
20.	Electricians.....	300
21.	Painters and Apprentices.....	270
22.	Auto Mechanics.....	260
23.	Billing Clerks.....	240
24.	Guards.....	240
25.	Secretaries (Legal).....	230

(Occupations Whose Annual Openings Due to Growth
Will be Less Than The Annual Separations)

1.	Compositors and Typesetters.....	-100
2.	Stenographers.....	- 60
3.	Bus Drivers	- 50
4.	Keypunch, Data Entry Operators...	- 40
5.	Cabinet Makers.....	- 20
6.	Cosmetologists	- 20
7.	Bakers.....	- 10
8.	Barbers	- 10
9.	Drill Press Operators	- 10
10.	Furniture & Wood Finishers.....	- 10
11.	Grinding Machine Operators.....	- 10
12.	Upholsterers.....	- 10

Source: "Employment Requirements by Occupation, by Industry 1976-1985" Occupational/Industry Publication, Massachusetts Division of Employment Security, December 1979.

Index 2

Alphabetical Index of High Demand Occupations

1. Air Conditioning, Heating and Refrigeration Mechanics
2. Assemblers
3. Bank, Financial Managers
4. Bookkeepers
5. Buyers, Wholesale and Retail
6. Carpenters and Apprentices
7. Child Care Workers
8. Clinical Lab Technicians
9. Computer Programmers
10. Computer Service Technologists
11. Computer Systems Analysts
12. Cooks
13. Dental Assistants
14. Dental Hygientists
15. Drafters
16. Electrical Engineers
17. Electricians and Apprentices
18. Electronic Technicians
19. Excavating and Grading Machine Operators
20. Expeditors, Production Controllers
21. Fork Lift Operatives
22. Health Administrators
23. Health Aides
24. Heavy Equipment Mechanics
25. Industrial Engineers
26. Insurance Adjusters, Examiners
27. Lathe Machine Operatives
28. Legal Secretaries
29. Machinists
30. Managers, Superintendents of Buildings
31. Mechanical Engineers
32. Medical Secretaries
33. Opticians and Lens Grinders
34. Other Secretaries
35. Painters and Apprentices
36. Personnel and Labor Relations Workers
37. Photographic Process Workers
38. Plumbers and Pipefitters
39. Practical Nurses
40. Purchasing Agents
41. Radio and Television Repairers
42. Radiologic Technicians
43. Real Estate Agents, Brokers
44. Receptionists
45. Registered Nurses
46. Shipping and Receiving Clerks
47. Therapists
48. Tool and Die Makers
49. Truck Drivers
50. Waitresses and Waiters

Index 3
High Demand Occupations by Major Occupational Clusters

I. Professional and Technical

A. Engineers

1. Electrical Engineers
2. Industrial Engineers
3. Mechanical Engineers
4. Drafters

B. Health

5. Registered Nurses
6. Clinical Lab Technicians
7. Dental Hygientists
8. Radiological Technologists
9. Therapists

C. Other Technical

10. Electronic Technicians
11. Computer Programmers
12. Computer Systems Analysts
13. Computer Service Technologists

D. Other Professionals, Managers and Proprietors

14. Personnel and Labor Relations
15. Bank, Financial Managers
16. Buyers, Wholesale and Retail
17. Purchasing Agents
18. Health Administrators
19. Managers, Superintendents of Buildings
20. Real Estate Agents, Brokers

II. Clerical Occupations

21. Legal Secretaries
22. Medical Secretaries
23. Other Secretaries
24. Bookkeepers
25. Expeditors, Production Controllers
26. Insurance Adjusters, Examiners
27. Receptionists
28. Shipping and Receiving Clerks

Index 3
(continued)

III. Craft Workers

29. Carpenters and Apprentices
30. Electricians and Apprentices
31. Painters and Apprentices
32. Plumbers and Pipefitters
33. Excavating and Grading Machine Operators
34. Heavy Equipment Mechanics
35. Air Conditioning, Heating and Refrigeration Mechanics
36. Machinists
37. Tool and Die Makers
38. Radio and Television Repairers
39. Opticians and Lens Grinders

IV. Operatives

40. Assemblers
41. Photographic Process Repairers
42. Fork Lift Operatives
43. Truck Drivers
44. Lathe Machine Operatives

V. Service Workers

45. Cooks
46. Waitresses and Waiters
47. Dental Assistants
48. Health Aides
49. Practical Nurses
50. Child Care Workers

V. Trends in Unemployment

The unemployment rate is the most widely used index for measuring the performance of a state's economy and the impact of that economy on individuals. It is designed to measure the portion of the overall labor force that is unutilized at any given period of time. One of the major sources of data at the national and state level is the Current Population Survey. The CPS is a monthly survey of 1,575 Massachusettc households conducted by the Bureau of Census for the United States Department of Labor's Bureau of Labor Statistics. The unemployment rate is calculated by dividing the number of people who are classified as unemployed by the civilian labor force which is the sum of the employed and unemployed. By definition, an unemployed individual is one who did not work at all during the reference weeks, had looked for work during the past four weeks, and was available for work at the same time of the survey.

This section will examine estimates of the 1980 annual average unemployment rates for the United States, Massachusetts, and the remaining states. In addition, demographic data is provided to view the unemployment situation of different components within the Massachusetts economy.

An analysis of recent activity in claims, presented in Table 17 shows that continued weeks claimed from January to June 1981 have averaged about the same as during the first six months of 1980. We expect the last half of the year to be different. Normally, there is a sharp increase in claims during July. This year we expect the claims activity to be especially great due to state and local government cutbacks caused by Proposition $2\frac{1}{2}$. Another significant factor is that the estimated number of people who have exhausted their unemployment benefits and are still jobless is about 20 percent greater than last year. We expect this situation to get worse.

The data from the Current Population Survey (CPS) on Tables 18 and 19 shows recent trends in the unemployment rate . The Massachusetts economy weathered well the national downturn in economic activity between the years 1979 and 1980. While the national unemployment rate was increasing by 1.3 percentage points, Massachusetts rate only increased 0.1 of a percentage point. Among the ten large CPS states, Massachusetts had the second lowest increase in unemployment. The data shows that Massachusetts has not followed the nation and other industrial states into higher unemployment as it did during the mid-seventies recession. In 1975 we were 2.7 percentage points higher than the national unemployment rate, and had the second highest rate among the ten large CPS states.

Why Does Massachusetts Have Lower Unemployment?

The difference in our performance during these periods may be traced to the changing composition of industry in Massachusetts. Those industries which are adversely affected by high inflation rates and decreased business activity such as leather and textiles have relatively declined in importance for the state. In their place, high technology industries have expanded, providing numerous job opportunities. Additionally, major defense contractors within Massachusetts are gearing up for military prime contract awards.

Another significant, yet often overlooked reason for our lower unemployment rate is that all important demographic groups in Massachusetts have profited by the higher employment levels. To put it another way, the major segments of our labor force experience unemployment at rates that are more nearly equal than is true nationally. The 1980 annual CPS data on Tables 20 and 21 illustrate this point. The Massachusetts unemployment rate in 1980 was 5.6 percent. The rates for men, women, Whites and Blacks and others were all virtually the same - either 5.6 or 5.7 percent. In many states the two sexes' rates often are very different, the rate for men usually being lower. In only two other states were the rates so nearly equal. Only Hawaii had a lower unemployment rate for Nonwhites in 1980 than Massachusetts. Hawaii is an exceptional state, since it is mostly Nonwhite, and most of its Nonwhite population is also not Black. Youth 16-19 years old is the only age cohort with an unemployment rate substantially higher than that of the state according to the CPS. Even so, our youth unemployment rate was comparatively low. At 14 percent it was below the national average, lower than any comparable state or larger, and was the lowest in the Northeast after New Hampshire and Vermont.

Finally, it is important to note that all areas of Massachusetts are not doing well. The map on page 67 and Table 23 illustrate this point. The Boston, Springfield, and Worcester labor areas carry the state. They have relatively low unemployment, and when combined account for approximately two-thirds of the state's labor force. Low statewide unemployment rates somewhat mask the fact that parts of Central Massachusetts, the North Shore, and the entire Southeastern part of the state (except Nantucket) consistently suffer unemployment levels which are equal to or greater than the national average. It is important to note that Southeast Massachusetts had the greatest percent increase in population during the past decade.

Future Trends

We have forecast a statewide unemployment rate of 5.7 percent for FFY 1982. This forecast could prove to be too optimistic due to several factors. First, the latest Data Resources Incorporated (DRI) forecast for the national economy anticipated rising unemployment rates through the last quarter of calendar 1981. This represents an additional quarter of rising unemployment rates.

In the past, Massachusetts went into recession later than the United States as a whole, and stayed in recession longer. However, the national recession has really affected us for the last six months. If past patterns hold true, Massachusetts may only start a real recovery during the March-June 1982 quarter. Therefore, our original estimate of 5.7 percent unemployment for FFY '82 would be too low.

Secondly, employment growth may not be as strong as we had hoped. Several of our high-tech firms have implemented hiring freezes, or have begun to lay off workers. One reason for this is the length of the national recession. Another and equally important reason is that Europe is also in recession. Many of our high-tech firms export a significant portion of their goods abroad. Europe is expected to have fairly strong growth in 1982 and 1983, so the long-term export prospects are good.

Lastly, we must deal with the affects of Proposition $2\frac{1}{2}$. Thousands of state and municipal workers will be let go just as the private sector employment growth is weakening. The 14,000 former state and municipal employees who collected unemployment benefits during July translates into an unemployment rate increase of one-half of a percentage point. Although we still do not know the full affects of Proposition $2\frac{1}{2}$, it undoubtedly will cause upward pressure on the unemployment rate.

Table 17
Claims Data
Monthly Survey Week
January 1980-June 1981

	State UI Continued Claimants	State UI Initial Claims	Federal Civilian Continued Claims	Unemployed Exhaustees
1980				
January	89,621	9,662	917	16,012
February	87,752	11,684	519	15,119
March	83,718	7,822	481	15,266
April	76,491	9,476	413	15,680
May	71,882	11,664	444	16,246
June	74,001	10,878	481	16,467
July	88,765	11,962	799	16,492
August	79,062	7,892	848	16,834
September	66,320	7,653	1,297	16,740
October	65,956	7,962	1,315	16,754
November	70,971	10,363	1,435	16,874
December	79,392	16,931	1,187	17,287
1980 Annual Average	77,828	10,329	845	16,314
1981				
January	99,567	10,722	1,033	17,872
February	94,159	11,452	778	18,478
March	88,297	8,439	600	18,878
April	74,585	10,762	469	19,503
May	64,801	8,374	600	19,673
June	64,902	11,386	618	19,673
1981 6-Month Average	81.052	10,189	683	19,013

Table 18

State Monthly Labor Force Data
(Seasonally Adjusted)
January 1980-June 1981
(in thousands)

Month	Labor Force	Employment	Unemployment	Unemployment Rate	
				Mass.	U. S.
1979 Annual Average	2891.0	2731.0	160.0	5.5	5.8
1980					
January	2831.0	2682.0	149.0	5.3	6.2
February	2843.0	2698.0	145.0	5.1	6.2
March	2852.0	2707.0	145.0	5.1	6.3
April	2860.0	2706.0	154.0	5.4	6.9
May	2883.0	2706.0	177.0	6.1	7.6
June	2836.0	2656.0	180.0	6.3	7.5
July	2873.0	2701.0	172.0	6.0	7.6
August	2892.0	2727.0	165.0	5.7	7.6
September	2932.0	2762.0	170.0	5.8	7.4
October	2988.0	2792.0	196.0	6.6	7.6
November	2964.0	2811.0	153.0	5.2	7.5
December	2968.0	2822.0	146.0	4.9	7.4
Annual Average	2893.0	2731.0	163.0	5.6	7.1
1981					
January	2917.0	2764.0	153.0	5.2	7.4
February	2969.0	2797.0	171.0	5.8	7.3
March	2954.0	2777.0	177.0	6.0	7.3
April	2904.0	2741.0	163.0	5.6	7.3
May	2917.0	2743.0	174.0	6.0	7.6
June	2928.0	2749.0	179.0	6.1	7.3

Table 19
1981 Unemployment Rates
Seasonally Adjusted
United States and Ten CPS States*

	January	February	March	April	May	June
United States	7.4	7.3	7.3	7.3	7.6	7.3
Massachusetts	5.2	5.8	6.0	5.6	6.0	6.1
California	7.5	7.6	7.2	7.1	6.5	6.7
Florida	6.1	6.7	7.0	6.2	7.3	6.0
Illinois	9.0	8.3	9.0	8.5	8.7	7.7
Michigan	13.0	13.5	12.6	11.9	11.3	10.6
New Jersey	7.5	6.9	8.6	7.9	7.8	7.0
New York	7.6	7.6	8.2	8.4	7.5	8.0
Ohio	9.7	9.4	8.9	7.7	8.2	7.9
Pennsylvania	8.7	8.0	7.2	7.3	8.7	9.0
Texas	5.2	4.4	4.8	4.6	5.3	6.6
Rank of Massachusetts	1st	2nd	2nd	2nd	2nd	2nd
Mass.- U. S. Difference in Percentage Points	-2.2	-1.5	-1.3	-1.7	-1.6	-1.2

* The CPS states are the ten large states which get their statewide employment and unemployment data from the National Burea of Labor Statistics.

Table 20
Unemployment by State and Race
1979 and 1980

Area	1979						1980					
	Total		White		Black and Other		Total		White		Black and Other	
	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank 1/	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank 1/
United States	5.8	--	5.1	--	11.3	--	7.1	--	6.3	--	13.2	--
Northeast	6.6	--	6.0	--	12.4	--	7.1	--	6.5	--	13.1	--
New England	5.4	--	5.2	--	10.3	--	6.0	--	5.8	--	9.3	--
Connecticut	5.1	18 3/	4.5	21 3/	14.3	31	5.9	15	5.5	20 3/	10.5	6
Maine	7.2	47 3/	7.1	47 3/	2/	-- 3/	7.7	38 3/	7.7	43 3/	2/	--
Massachusetts	5.5	24 3/	5.5	34 3/	7.0	5 3/	5.6	11 3/	5.6	22	5.7	2
New Hampshire	3.1	2	3.1	4 3/	2/	--	4.7	4 3/	4.7	9 3/	2/	--
Rhode Island	6.6	37 3/	6.5	43 3/	2/	--	7.2	30 3/	7.2	39 3/	2/	--
Vermont	5.1	18	5.1	30 3/	2/	--	6.4	20 3/	6.4	31	2/	--
Middle Atlantic	7.0	--	6.2	--	12.7	--	7.5	--	6.7	--	13.6	--
New Jersey	6.9	43 3/	6.2	40	12.2	22 3/	7.2	30 3/	6.2	27 3/	15.0	24 3/
New York	7.1	45 3/	6.4	41 3/	11.6	21	7.6	36 3/	6.9	37 3/	11.5	9 3/
Pennsylvania	6.9	43 3/	6.1	39	16.2	35	7.8	40	6.8	36	17.4	33
South	5.4	--	4.2	--	10.7	--	6.4	--	5.2	--	12.2	--
South Atlantic	5.5	--	4.3	--	10.3	--	6.4	--	5.1	--	11.3	--

Table 20
Unemployment by State and Race
1979 and 1980
(continued)

Area	1979						1980					
	Total		White		Black and Other		Total		White		Black and Other	
	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank 1/	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank 1/
South Atlantic (continued)												
Delaware	8.0	49	7.1	47 3/	14.9	33	7.7	38 3/	6.7	35 3/	15.0	24 3/
Florida	6.0	32	4.9	27 3/	10.9	17 3/	6.0	16 3/	5.1	14 3/	10.0	4
Georgia	5.1	18 3/	3.7	10 3/	11.1	18 3/	6.4	20 3/	4.8	10 3/	13.1	17
Maryland	5.9	30 3/	4.2	16 3/	12.2	22 3/	6.4	20 3/	5.3	16 3/	10.2	5
North Carolina	4.8	15 3/	3.7	10 3/	8.9	10	6.6	23	5.1	14 3/	12.2	15 3/
South Carolina	5.0	17	4.4	18 3/	6.9	4 3/	6.9	27	4.9	13 3/	12.1	14
Virginia	4.7	14 3/	3.4	8 3/	11.1	18 3/	5.1	9	3.8	2 3/	11.1	7
West Virginia	6.7	39 3/	6.4	41 3/	2/	--	9.4	47	9.1	49	2/	--
East South Central	6.1	--	4.9	--	11.9	--	7.9	--	6.3	--	15.2	--
Alabama	7.1	45 3/	5.4	33	13.0	26	8.8	46	6.5	32 3/	15.7	29
Kentucky	5.6	26 3/	5.3	32 3/	9.6	13 3/	8.1	42 3/	7.7	43 3/	14.2	20
Mississippi	5.8	28 3/	3.7	10 3/	10.5	15 3/	7.5	34 3/	4.8	10 3/	13.9	19
Tennessee	5.8	28 3/	4.6	24 3/	12.8	24 3/	7.2	30 3/	5.7	23 3/	15.6	28
West South Central	4.7	--	3.8	--	10.8	--	5.7	--	4.7	--	11.9	--
Arkansas	6.2	33 3/	4.4	18 3/	17.3	37 3/	7.6	36 3/	6.5	32 3/	15.3	26
Louisiana	6.7	39 3/	4.5	21 3/	12.8	24 3/	6.7	24 3/	4.8	10 3/	12.2	15 3/
Oklahoma	3.4	4 3/	3.0	2 3/	8.6	9	4.8	6	4.1	5	13.2	18
Texas	4.2	9 3/	3.7	10 3/	8.5	8	5.3	10	4.5	7 3/	11.2	8

Table 20
Unemployment by State and Race
1979 and 1980
(continued)

Area	1979 Total Unemployment Rate	1979 Total State's Rank	1979 White Unemployment Rate	1979 White State's Rank	1979 Black and Other Unemployment Rate	1979 Black and Other State's Rank 1/	1980 Total Unemployment Rate	1980 Total State's Rank	1980 White Unemployment Rate	1980 White State's Rank	1980 Black and Other Unemployment Rate	1980 Black and Other State's Rank 1/
North Central	5.5	--	4.7	--	13.2	--	8.2	--	7.3	--	18.3	--
East North Central	6.1	--	5.3	--	13.5	--	9.3	--	8.2	--	18.9	--
Illinois	5.5	24 3/	4.6	24 3/	11.4	20	8.3	44	7.3	41 3/	15.5	27
Indiana	6.4	36	5.7	36	15.2	34	9.6	48 3/	8.8	48	19.2	36
Michigan	7.8	48	6.5	43 3/	16.3	36	12.6	50	11.1	50	23.5	38
Ohio	5.9	30 3/	5.1	30 3/	13.6	29	8.4	45 3/	7.3	41 3/	19.1	35
Wisconsin	4.5	12 3/	4.4	18 3/	9.4	11 3/	7.0	28 3/	6.6	34	17.7	34
West North Central	4.0	--	3.6	--	11.7	--	5.6	--	5.2	--	15.2	--
Iowa	4.1	8 3/	4.0	14 3/	2/	-- 3/	5.7	13 3/	5.3	16 3/	2/	--
Kansas	3.4	4 3/	3.2	6 3/	7.0	5 3/	4.4	3	3.8	2 3/	14.9	23
Minnesota	4.2	9 3/	4.1	15	2/	--	5.7	13 3/	5.5	20 3/	2/	--
Missouri	4.5	12 3/	3.5	9 3/	13.4	27 3/	7.0	28 3/	6.2	27 3/	14.6	21
Nebraska	3.2	3	3.0	2 3/	2/	--	4.0	2	3.6	1	2/	--
North Dakota	3.7	7	3.2	6 3/	2/	--	4.9	7	4.5	7 3/	2/	--
South Dakota	3.5	6	3.1	4 3/	2/	--	4.7	4 3/	4.2	6	16.7	32

Table 20
Unemployment by State and Race
1979 and 1980
(continued)

Area	1979						1980					
	Total		White		Black and Other		Total		White		Black and Other	
	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank 1/	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank	Unemployment Rate	State's Rank 1/
West	6.0	--	5.9	--	9.0	--	6.8	--	6.3	--	10.9	--
Mountain	5.0	--	4.8	--	9.8	--	6.2	--	6.0	--	12.4	--
Arizona	5.1	18 3/	4.9	27 3/	8.2	7	6.7	24 3/	6.3	30	15.9	30
Colorado	4.8	15 3/	4.5	21 3/	10.5	15 3/	5.6	11 3/	5.3	16 3/	11.7	12
Idaho	5.7	27 3/	5.6	35	2/	--	7.9	41 3/	7.8	45	2/	--
Montana	5.1	18 3/	4.7	26	14.7	32	6.0	16 3/	5.4	19 3/	20.0	37
Nevada	5.1	18 3/	5.0	29	6.4	2 3/	6.2	18 3/	5.7	23 3/	9.4	3
New Mexico	6.6	37 3/	6.0	38	13.4	22 3/	7.4	33	6.9	37 3/	11.9	13
Utah	4.3	11	4.2	16 3/	6.4	3/	6.2	18 3/	6.1	25	2/	--
Wyoming	2.8	1	2.8	1	2/	--	3.9	1	3.9	4	2/	--
Pacific	6.4	--	6.0	--	8.9	--	7.0	--	6.4	--	10.7	--
Alaska	9.2	50 3/	8.3	49	13.7	30 3/	9.6	48 3/	8.6	47 3/	14.8	22 3/
California	6.2	33 3/	5.8	37	9.4	11 3/	6.8	26	6.1	25 3/	11.5	9 3/
Hawaii	6.3	35 3/	8.7	50	5.3	1	5.0	8	6.2	27 3/	4.7	1
Oregon	6.8	41 3/	6.7	46	2/	--	8.2	43 3/	8.0	46 3/	16.0	31
Washington	6.8	41 3/	6.6	45	10.0	14	7.5	34 3/	7.2	39 3/	11.6	11

1/ Unemployment Data for Blacks and Others was available for 37 states for 1979, and 38 States for 1980.

2/ Data Unavailable.

3/ Tied.

Source: Draft copy of the 1980 Geographic Profile of Employment and Unemployment 1980.

Table 21
1980 Annual Average Unemployment Rates
Men, Women, and Youth
(in percents)

	Total	Men	Women	Both Sexes 16-19 Years Old
United States	7.1	6.9	7.4	17.9
Massachusetts	5.6	5.7	5.6	14.0
U. S.-Massachusetts Percentage Point Difference	-1.5	-1.2	-1.8	- 3.9
Massachusetts Ranking Among The States	11th	17th	10th	12th
Alabama	8.8	7.6	10.4	25.0
Alaska	9.6	10.1	8.8	20.9
Arizona	6.7	6.9	6.3	18.2
Arkansas	7.6	7.2	8.2	22.8
California	6.8	6.8	6.8	18.2
Colorado	5.6	5.0	6.4	15.8
Connecticut	5.9	5.2	6.8	17.5
Delaware	7.7	6.8	8.9	20.0
Florida	6.0	5.3	6.8	18.1
Georgia	6.4	4.8	8.5	16.1
Hawaii	5.0	4.6	5.4	14.6
Idaho	7.9	7.4	8.5	17.3
Illinois	8.3	8.5	8.1	19.3
Indiana	9.6	9.6	9.7	21.8
Iowa	5.7	5.7	5.9	14.9
Kansas	4.4	4.1	4.8	11.6
Kentucky	8.1	8.4	7.7	20.2
Louisiana	6.7	6.4	7.1	19.5
Maine	7.7	7.2	8.4	17.9
Maryland	6.4	6.1	6.9	17.3
Michigan	12.6	13.6	11.1	20.9
Minnesota	5.7	6.1	5.1	11.7
Mississippi	7.5	5.8	9.5	22.2
Missouri	7.0	7.0	7.1	16.2
Montana	6.0	5.6	6.5	16.2
Nebraska	4.0	3.6	4.6	10.3
Nevada	6.2	6.0	6.4	15.2
New Hampshire	4.7	4.4	5.1	12.4
New Jersey	7.2	6.6	8.1	20.2
New Mexico	7.4	7.1	7.9	21.2

Table21
1980 Annual Average Unemployment Rates
Men, Women, and Youth
(in percents)

(continued)

	Total	Men	Women	Both Sexes 16-19 Years Old
New York	7.6	7.4	7.7	20.1
North Carolina	6.6	6.1	7.1	18.6
North Dakota	4.9	4.7	5.2	12.9
Ohio	8.4	8.4	8.3	17.7
Oklahoma	4.8	4.6	5.0	12.9
Oregon	8.2	7.7	9.0	17.7
Pennsylvania	7.8	7.8	7.8	19.8
Rhode Island	7.2	6.7	7.9	17.1
South Carolina	6.9	6.2	7.7	13.5
South Dakota	4.7	4.8	4.6	8.5
Tennessee	7.2	6.8	7.7	20.8
Texas	5.3	4.5	6.3	15.7
Utah	6.2	5.6	7.1	13.4
Vermont	6.4	5.6	7.5	12.3
Virginia	5.1	4.3	6.1	18.3
Washington	7.5	7.5	7.4	15.2
West Virginia	9.4	9.8	8.6	23.2
Wisconsin	7.0	7.3	6.6	17.4
Wyoming	3.9	3.1	5.1	9.4

Source: Draft copy, Geographic Profile of Employment and Unemployment - 1980

Table 22
Trends In unemployment
1970-1980

Annual Averages	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
United States	4.9	5.9	5.6	4.9	5.6	8.5	7.7	7.0	6.0	5.8	7.1
Massachusetts	4.6	6.6	6.4	6.7	7.2	11.2	9.5	8.1	6.1	5.5	5.6
New England - Total	4.9	6.9	6.8	6.1	6.6	10.4	9.1	7.7	5.7	5.4	6.0
Connecticut	5.7	8.4	8.6	6.3	6.1	9.1	9.5	7.0	5.2	5.1	5.9
Maine	5.5	7.4	6.8	5.8	6.5	10.3	8.9	8.4	6.1	7.2	7.7
New Hampshire	3.8	5.1	4.8	4.4	5.5	9.0	6.4	5.9	3.8	3.1	4.7
Rhode Island	4.1	5.4	5.1	4.8	5.5	11.2	8.1	8.6	6.6	6.6	7.2
Vermont	4.5	6.3	11.9	5.3	6.4	9.4	8.7	7.0	5.7	5.1	6.4
Rank of Massachusetts	4th	4th	3rd	6th	6th	6th	6th	4th	4th[3]	4th	2nd
Mass.-New England Difference	-0.3	-0.3	-0.4	+0.6	+0.6	+0.8	+0.4	+0.4	+0.4	+0.1	-0.4
CPS States											
California	7.3	8.8	7.6	7.0	7.3	9.9	9.2	8.2	7.1	6.2	6.8
Florida	4.3	4.9	5.1	4.3	6.2	10.7	9.0	8.2	6.6	6.0	6.0
Illinois	3.6	5.1	5.1	4.1	4.2	7.1	6.5	6.2	6.1	5.5	8.3
Michigan	6.7	7.6	7.0	5.9	7.4	12.5	9.4	8.2	6.9	7.8	12.6
New Jersey	4.6	5.7	5.8	5.6	6.3	10.2	10.4	9.4	7.2	6.9	7.2
New York	4.5	6.6	6.7	5.4	6.4	9.5	10.3	9.1	7.7	7.1	7.6
Ohio	5.4	6.5	5.5	4.3	4.8	9.1	7.8	6.5	5.4	5.9	8.4
Pennsylvania	4.5	5.4	5.4	4.8	5.1	8.3	7.9	7.7	6.9	6.9	7.8
Texas	4.4	5.0	4.5	3.9	4.3	5.6	5.7	5.3	4.8	4.2	5.3
Rank of Massachusetts	6th[1]	7th[2]	7th	9th	8th	9th	8th	5th	3rd[4]	2nd[4]	2nd
Mass.-United States Difference	-0.3	+0.7	+0.9	+1.8	+1.6	+2.7	+1.8	+1.1	+0.1	-0.3	-1.5

1/ Tied with New Jersey
2/ Tied with New York
3/ Tied with Maine
4/ Tied with Illinois

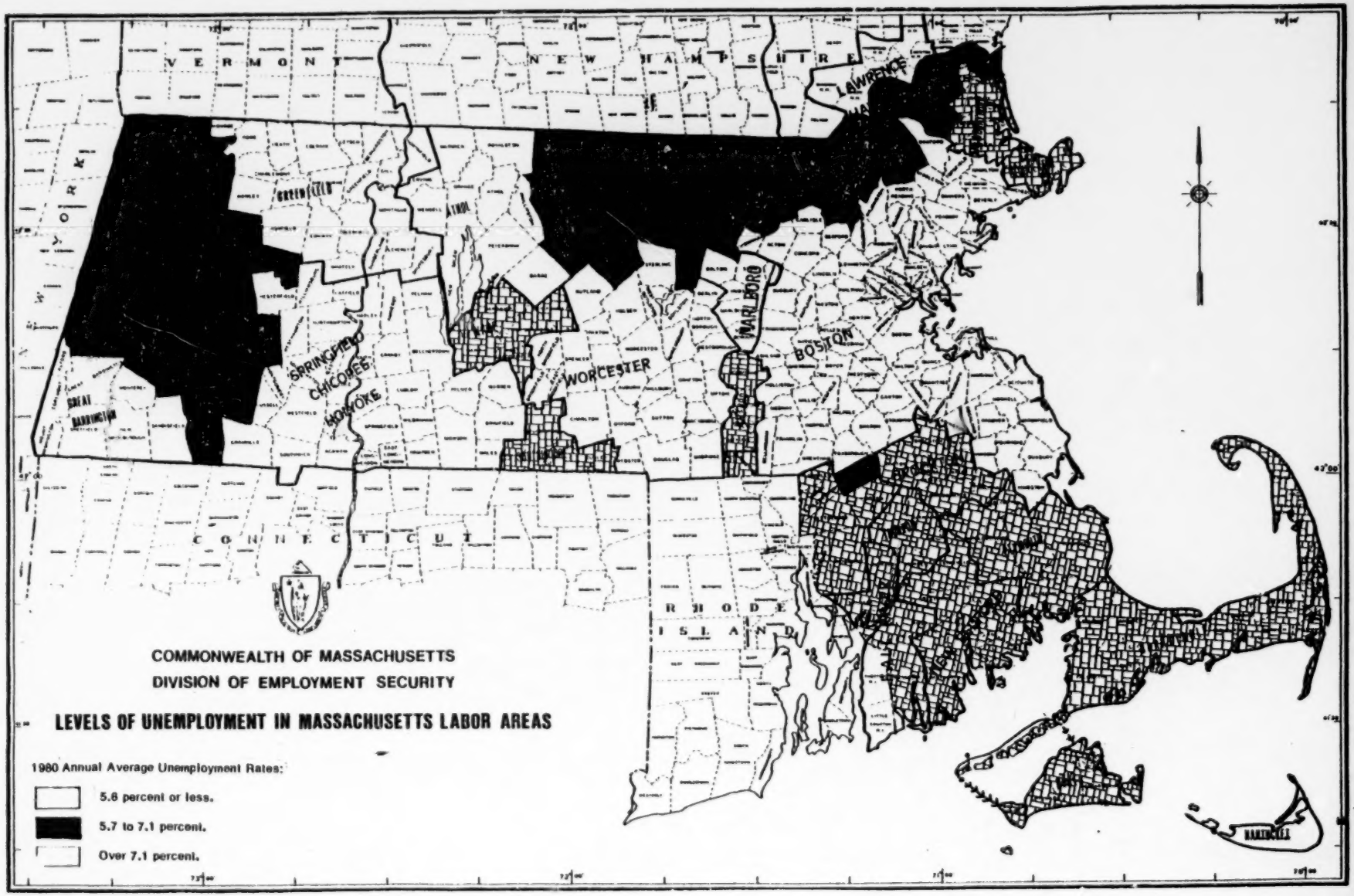
VERMONT
NEW HAMPSHIRE
NEW YORK
CONNECTICUT
RHODE ISLAND
LAWRENCE
GREENFIELD
ATHOL
MARLBORO
BOSTON
SPRINGFIELD
CHICOPEE
HOLYOKE
WORCESTER
GREAT BARRINGTON
COMMONWEALTH OF MASSACHUSETTS
DIVISION OF EMPLOYMENT SECURITY
LEVELS OF UNEMPLOYMENT IN MASSACHUSETTS LABOR AREAS
1980 Annual Average Unemployment Rates:
5.6 percent or less.
5.7 to 7.1 percent.
Over 7.1 percent.

Table 23
Labor Force, Employment, Unemployment
Massachusetts and The Labor Areas
1980 Annual Averages
(in thousands)

Areas	Labor Force	Employment	Unemployment	Unemployment Rate
Massachusetts	2893.0	2731.0	163.0	5.6
Major Labor Areas				
Boston SMSA	1407.0	1336.7	70.3	5.0
Brockton SMSA	81.8	76.2	5.6	6.8
Fall River LMA*	66.5	61.0	5.5	8.2
Lawrence-Haverhill SMSA*	115.7	108.5	7.2	6.2
Lowell LMA	121.4	114.6	6.9	5.7
New Bedford LMA	81.7	75.2	6.6	8.1
Springfield LMA	271.9	257.0	14.9	5.5
Worcester LMA	197.4	187.2	10.2	5.2
Other Labor Areas				
Athol	11.1	10.5	0.6	5.5
Barnstable	67.3	61.7	5.6	8.4
Clinton	9.7	9.1	0.6	5.8
Dukes	5.5	5.1	0.4	6.7
Fitchburg-Leominster	48.0	45.0	3.0	6.1
Gardner	21.1	19.9	1.3	6.0
Gloucester	24.0	22.1	2.0	8.2
Great Barrington	9.4	8.9	0.5	4.9
Greenfield	28.2	26.7	1.5	5.4
Marlboro	59.8	57.4	2.4	4.0
Milford	17.7	16.5	1.3	7.2
Nantucket	3.0	2.9	0.1	4.7
Newburyport	18.0	16.8	1.2	6.8
Pittsfield	70.0	65.7	4.3	6.1
Plymouth	41.4	38.6	2.8	6.8
Southbridge	16.4	15.3	1.1	6.6
Taunton	26.1	24.1	2.0	7.8
Ware	6.0	5.5	0.5	8.2
Massachusetts Share of Providence Rhode Island LMA	46.8	43.7	3.1	6.6
Balance of State	20.5	19.2	1.3	6.5

* Massachusetts Portion

Data may not add due to rounding.
All unemployment rates were computed using unrounded data.

Table 24
Unemployment Rate Trend Series
1975-1980
Massachusetts

Areas	1975	1976	1977	1978	1979	1980
United States	8.5	7.7	7.0	6.0	5.8	7.1
Massachusetts	11.2	9.5	8.1	6.1	5.5	5.6
Major Labor Areas						
Boston SMSA	10.5	9.1	7.8	5.8	5.3	5.0
Brockton SMSA	11.7	10.3	9.2	6.5	6.2	6.8
Fall River LMA*	11.6	9.6	9.4	7.3	7.5	8.2
Lawrence-Haverhill SMSA*	13.6	12.8	10.1	7.1	7.2	6.2
Lowell LMA	12.0	10.2	8.4	6.4	5.5	5.7
New Bedford LMA	14.0	11.4	10.9	8.5	7.5	8.1
Springfield LMA	11.3	9.0	7.1	5.3	4.8	5.5
Worcester LMA	11.2	8.9	6.7	4.9	4.6	5.2
Other Labor Areas						
Athol	11.3	10.5	8.3	5.7	5.3	5.5
Barnstable	13.5	12.3	11.3	8.7	7.6	8.4
Clinton	12.5	10.5	12.3	7.8	5.9	5.8
Dukes	8.9	8.9	9.5	7.2	7.8	6.7
Fitchburg-Leominster	13.5	10.1	8.2	5.7	4.9	6.1
Gardner	12.5	10.9	8.8	5.9	5.1	6.0
Gloucester	12.0	10.7	10.5	9.8	8.5	8.2
Great Barrington	6.5	6.2	6.3	5.2	4.6	4.9
Greenfield	9.7	9.0	7.5	5.6	4.9	5.4
Marlboro	7.9	6.1	5.1	4.4	3.6	4.0
Milford	13.1	10.2	8.0	5.6	5.3	7.2
Nantucket	6.3	6.4	7.2	5.8	5.5	4.7
Newburyport	13.1	11.1	9.3	7.3	7.0	6.8
Pittsfield	10.5	9.6	8.7	6.6	5.7	6.1
Plymouth	13.6	12.2	11.8	9.6	8.1	6.8
Southbridge	11.4	8.2	6.3	4.9	4.6	6.6
Taunton	13.2	8.9	9.3	7.1	7.0	7.8
Ware	18.8	14.3	10.3	6.9	6.4	8.2
Massachusetts Share of Providence Rhode Island Labor Market Area	9.5	7.7	8.0	6.2	6.1	6.6
Balance of State	12.1	10.0	8.5	6.6	6.2	6.5

* Massachusetts Portion

Characteristics of the Insured Unemployed

The following tables contain information about the characteristics of the insured unemployed. Information on the characteristics of the insured unemployed may help to achieve the following objectives:

a. Assist manpower planners in identifying target population;

b. Help give direction to governmental economic policy;

c. Identify the nature of unemployment within the state;

d. Improve public information and understanding;

Tables 25 through 27 are based on data obtained from a 9.4 percent sample of the first payments of unemployment compensation from April to June 1981. The distribution levels given do not necessarily reflect the same levels for those who are unemployed, especially those who are not insured under the Massachusetts Employment Security Law. Approximately 30 percent of the state's unemployed are not insured under this law.

The sample results showed that the average age of claimants receiving a first payment was 47, that their average weekly wage had been $202.00, and that only 2.4 percent of the claimants had deductions from their weekly benefit payments due to pension income. The majority of claimants were men (55 percent), and, on average, were younger than their female counterparts. Proportionately there were twice as many female claimants over 55 as males. Some 56 percent of the females in the sample earned under $7,000 per year, as opposed to 40 percent of the men. This points up the fact that many of the women claimants had part-time employment. At the other end of the earnings spectrum, 14.7 percent of the men had been earning $16,000 per year or better, as opposed to 3.6 percent of the women.

Tables 28A and 28B show the industrial attachment of claimants from July 1, 1980 through June 30, 1981. Although the construction industry never provided more than 3 percent of the nonagricultural jobs during the year, the industry never had less then 9 percent of the claimants. From January to June 1981, male claimants who last worked in construction accounted for over 30 percent of the male total. The manufacturing industries are also disproportionately represented among those collecting unemployment.

The tables on the racial characteristics of the insured unemployed contain monthly information from January 1980 through March 1981. The data shows that nine out of ten claimants were White. Nonwhites consistently represent a higher percentage of the insured unemployed than of the general population. Claimants with a Spanish surname accounted for a maximum of 2 percent of the monthly claimant totals. This compares favorably with the fact that Spanish surnamed individuals are 2.5 percent of the total population. (United States Census of Population, 1980).

In analyzing the average weekly wage, you should note this definition:

Average Weekly Wage:	An amount equal to one-twenty-sixth of the total wage reported for an individual in the two highest quarters of his base period, or if wages were reported for not more than two quarters, the average weekly wage was equal to one-thirteenth of the highest quarter's reported wage.

Table 25A
Age Of Claimants
Percents By Age and Sex
April to June 1981

	Total	Males	Females
	100.0	55.1	44.9
Age			
Under 20	5.9	3.3	2.7
20-24	18.0	11.4	6.6
25-34	30.1	19.0	11.0
35-44	17.0	9.0	8.1
45-54	14.0	6.5	7.5
55-64	12.6	4.8	7.8
65+	2.4	1.2	1.2

Table 25B
Age Of Claimants
Percents By Sex
April to June 1981

	Total	Males	Females
Total	100.0	100.0	100.0
Age			
Under 20	5.9	5.9	5.9
20-24	18.0	20.6	14.7
25-34	30.1	34.5	24.6
35-44	17.0	16.2	18.1
45-54	14.0	11.8	16.8
55-64	12.6	8.7	17.3
65+	2.4	2.2	2.6

Table 26
Total Wages Paid During Benefit Year
Percents By Sex
April to June 1981

	Total	Males	Females
	100.0	100.0	100.0
Total Wages			
$0 - 1,199	0.1	0.1	0.1
1,200- 3,999	16.3	10.7	23.2
4,000- 6,999	25.5	19.6	32.8
7,000- 9,999	19.0	16.8	21.6
10,000- 12,999	14.5	15.9	12.8
13,000- 15,999	10.1	13.4	6.0
16,000- 18,999	6.2	9.3	2.3
19,000- 21,999	3.6	6.0	0.6
22,000- 24,999	2.3	3.9	0.3
25,000- 27,999	1.1	1.8	0.3
28,000- 30,999	0.7	1.2	0.1
31,000 or more	0.8	1.4	0.0

Table 27A
Average Weekly Wage
Percents by Age and Amount
All Claimants - April to June 1981

	Total	Age						
		Under 20	20-24	25-34	35-44	45-54	55-64	65+
Average Weekly Wage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under $100	10.5	19.3	8.6	7.5	11.0	11.5	11.9	22.8
$100-149	19.3	41.8	23.1	14.5	14.6	18.4	20.6	25.7
150-199	19.4	25.3	23.6	18.3	17.5	16.4	20.8	9.9
200-249	14.5	6.4	19.9	15.5	11.5	14.2	12.6	13.9
250-299	11.0	2.8	10.7	15.3	9.6	7.9	11.7	5.9
300-349	8.3	3.2	7.4	10.1	10.2	7.8	6.2	7.9
350-399	5.5	0.8	3.7	6.3	7.4	6.4	5.1	2.0
400-449	4.1	0.0	1.6	5.1	6.0	5.1	3.6	3.0
450 or more	7.5	0.4	1.6	7.4	12.2	12.3	7.5	8.9

Table 27B
Average Weekly Wage
Percents By Age and Amount
Male Claimants
April to June 1981

	Total	Age						
		Under 20	20-24	25-34	35-44	45-54	55-64	65+
Average Weekly Wage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under $100	4.8	16.1	6.5	4.1	1.6	2.5	2.0	15.4
$100-149	11.9	35.0	17.7	9.8	6.4	5.8	7.9	15.4
150-199	16.0	28.5	24.2	14.4	11.7	9.1	14.4	7.7
200-249	15.2	8.8	20.6	16.3	9.5	13.5	14.9	17.3
250-299	13.5	5.1	13.1	17.2	12.2	10.9	12.4	7.7
300-349	11.3	5.1	8.3	12.5	15.4	12.0	9.4	11.5
350-399	7.9	0.7	5.0	7.6	11.4	10.5	11.9	3.8
400-449	6.7	0.0	2.3	7.1	10.6	9.8	8.4	5.8
450 or more	12.8	0.7	2.3	11.0	21.2	25.8	18.8	15.4

Table 27C
Average Weekly Wage
Percents by Age and Amount
Female Claimants
April to June 1981

	Total	Age						
		Under 20	20-24	25-34	35-44	45-54	55-64	65+
Average Weekly Wage	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under $100	17.4	23.2	12.2	13.3	21.3	19.2	18.0	30.6
$100-149	28.3	50.0	32.3	22.6	23.7	29.3	28.4	36.7
150-199	23.5	21.4	22.6	24.9	24.0	22.7	24.7	12.2
200-249	13.6	3.6	18.6	14.0	13.7	14.8	11.3	10.2
250-299	8.1	0.0	6.5	12.0	6.7	5.4	11.3	4.1
300-349	4.7	0.9	5.7	6.0	4.4	4.1	4.3	4.1
350-399	2.4	0.9	1.4	4.1	2.9	2.8	0.9	0.0
400-449	0.9	0.0	0.4	1.7	0.9	0.9	0.6	0.0
450 or more	1.1	0.0	0.4	1.3	2.3	0.6	0.6	2.0

Table 28A
U.I. Benefit Payments By Industry and Sex 1/

Industry			3rd Qtr. 1980	Percent	4th Qtr. 1980	Percent	1st Qtr. 1981	Percent	2nd Qtr. 1981	Percent
15-89		Total	162596	100.0	147139	100.0	198447	100.0	137744	100.0
		Male	91758	56.4	85149	57.9	131758	66.4	82591	60.0
		Female	70838	43.6	61990	42.1	66689	33.6	55153	40.0
15-17	Construction	Total	15193	100.0	17813	100.0	48707	100.0	20539	100.0
		Male	14238	93.7	16535	92.8	46759	96.0	19388	94.4
		Female	955	6.3	1278	7.2	1948	4.0	1151	5.6
19-39	Manufacturing	Total	70489	100.0	64526	100.0	69334	100.0	58209	100.0
		Male	38741	55.0	32758	50.8	37748	54.4	30312	52.1
		Female	31748	45.0	31768	49.2	31586	45.6	27897	47.9
40-49	Transp., Comm., Elec., Gas & Sanitary Svcs.	Total	12065	100.0	6493	100.0	9441	100.0	6194	100.0
		Male	5821	48.2	4667	71.9	7468	79.1	4495	72.6
		Female	6244	51.8	1826	28.1	1973	20.9	1699	27.4
50-59	Wholesale & Retail Tr.	Total	35586	100.0	31475	100.0	41250	100.0	30530	100.0
		Male	19938	56.0	18529	58.9	23836	57.8	17290	56.6
		Female	15648	44.0	12946	41.1	17414	42.2	13240	43.4
60-60	Fin., Ins., & Real Est.	Total	4336	100.0	4131	100.0	4797	100.0	4070	100.0
		Male	1893	43.7	1896	45.9	2508	52.3	1965	48.3
		Female	2443	56.3	2235	54.1	2289	47.7	2105	51.7
70-89	Services	Total	24927	100.0	22701	100.0	24918	100.0	18202	100.0
		Male	11127	44.6	10764	47.4	13439	53.9	9141	50.2
		Female	13800	55.4	11937	52.6	11479	46.1	9061	49.8

1/ Percentages by Industry

Source: Special Industrial Report for Survey Month, averaged by quarter.

Table 28B
U.I. Benefit Payments By Industry and Sex 1/

Industry			3rd Qtr. 1980	Percent	4th Qtr. 1980	Percent	1st Qtr. 1981	Percent	2nd Qtr. 1981	Percent
15-89		Total	162596	100.0	147139	100.0	198447	100.0	137744	100.0
		Male	91758	56.4	85149	57.9	131758	66.4	82591	60.0
		Female	70838	43.6	61990	42.1	66689	33.6	55153	40.0
15-17	Construction	Total	15193	9.4	17813	12.1	48707	24.5	20539	14.9
		Male	14238	8.8	16535	11.2	46759	23.5	19388	14.1
		Female	955	0.6	1278	0.9	1948	1.0	1151	0.8
19-39	Manufacturing	Total	70489	43.3	64526	43.9	69334	34.9	58209	42.2
		Male	38741	23.8	32758	22.3	37748	19.0	30312	22.0
		Female	31748	19.5	31768	21.6	31586	15.9	27897	20.2
40-49	Transp. Comm., Elec.,	Total	12065	7.4	6493	4.4	9441	4.8	6194	4.5
	Gas, & Sanitary Svcs.	Male	5821	3.6	4667	3.2	7468	3.8	4495	3.3
		Female	6244	3.8	1826	1.2	1973	1.0	1699	1.2
50-59	Wholesale & Retail Tr.	Total	35586	21.9	31475	21.4	41250	20.8	30530	22.2
		Male	19938	12.3	18529	12.6	23836	12.0	17290	12.6
		Female	15648	9.6	12946	8.8	17414	8.8	13240	9.6
60-69	Fin., Ins., & Real Est.	Total	4336	2.7	4131	2.8	4797	2.4	4070	3.0
		Male	1893	1.2	1896	1.3	2508	1.3	1965	1.4
		Female	2443	1.5	2235	1.5	2289	1.1	2105	1.6
70-89	Services	Total	24927	15.3	22701	15.4	24918	12.6	18202	13.2
		Male	11127	6.8	10764	7.3	13439	6.8	9141	6.6
		Female	13800	8.5	11937	8.1	11479	5.8	9061	6.6

1/ Percentages based on total.

Source: Special Industrial Report for Survey Month, averaged by quarter.

Table 29A
Racial Characteristics of Insured Unemployed*
By Massachusetts CETA Prime Sponsors
March 1981

	White	Nonwhite	Spanish Surname	Other	Not Coded	Total Claims
Mass. CETA Prime Sponsors	65,877	3,131	1,507	623	71	71,209
Boston	4,749	1,672	486	161	6	7,074
Brockton	2,744	80	26	23	2	2,875
Cambridge (EMERDA)	2,615	124	84	43	1	2,867
Fall River	2,809	14	0	13	2	2,838
Lowell	2,172	19	15	16	3	2,225
New Bedford	3,643	260	11	13	4	3,931
Pittsfield	1,810	10	2	13	2	1,837
Salem	3,630	44	10	18	1	3,703
Springfield	5,460	404	305	30	9	6,208
Worcester	3,102	77	84	19	4	3,286
Balance of State	33,143	427	484	274	37	34,365

* By Number

Table 29B
Racial Characteristics Of Insured Unemployed**
By Massachusetts CETA Prime Sponsors
March 1981

	White	Nonwhite	Spanish Surname	Other	Not Coded	Total Claims
Mass. CETA Prime Sponsors	92.5	4.4	2.1	0.9	0.1	100.0
Boston	67.1	23.6	6.9	2.3	0.1	100.0
Brockton	95.4	2.8	0.9	0.8	0.1	100.0
Cambridge (EMERDA)	91.2	4.3	2.9	1.5	0.0	100.0
Fall River	99.0	0.5	0.0	0.5	0.1	100.0
Lowell	97.6	0.9	0.7	0.7	0.1	100.0
New Bedford	92.7	6.6	0.3	0.3	0.1	100.0
Pittsfield	98.5	0.5	0.1	0.7	0.1	100.0
Salem	98.0	1.2	0.3	0.5	0.0	100.0
Springfield	88.0	6.5	4.9	0.5	0.1	100.0
Worcester	94.4	2.3	2.6	0.6	0.1	100.0
Balance Of State	96.4	1.2	1.4	0.8	0.1	100.0

** In Percent

VI. Labor Supply-Demand Imbalances

The Employment Service Automated Reporting System (ESARS) reported the occupations of 122,373 active applicants and 20,580 unfilled openings on file in all Massachusetts Job Matching Service Offices at the end of March 1981.

The data supplied by the ESARS System can be used in an analysis of labor supply and demand within the state. Especially useful in this type of analysis is the ratio of active applicants to unfilled job openings by occupation (Table 30). The ratios have been calculated to assist educational and manpower planners in pinpointing those occupations for which there is a demand. An occupational ratio greater than 3 to 1 may be considered as an occupation with a surplus of applicants, while an occupational ratio below 3 to 1 usually indicates high net demand occupations.

Before analyzing the data it is important to define some of the limitations of the ESARS system. The Job Bank openings refer only to positions listed within the Division of Employment Security. Unfortunately, a substantial number of job openings are never received by the Massachusetts Job Bank. Many job openings are filled by promotion from within a company. Many of Massachusetts' employers advertise their openings in local newspapers, or recruit through schools and private employment agencies, especially in the professional and technical fields. However, it should be noted that employers with federal government contracts are mandated by law to list certain openings with the Job Bank. In such cases some highly paid professional and technical positions, which might not otherwise be listed, would be included on the Job Bank. On the supply side some individuals may be more likely than others to use the Job Bank in seeking employment. Individuals seeking entry level employment such as youth and women reentering the workforce use the Job Matching Service in their job search efforts. Table 31 lists the characteristics of active applicants registered at job matching service centers.

In looking at the ratios of applicants to unfilled job openings, we see a wide disparity among the various occupations. Some shortages may exist because of a lack of qualified applicants, especially in the experienced professional and technical occupations. In other cases, employers may find that their positions go unfilled because of noncompetitive wages, unsuitable working conditions, transportation problems, etc. The occupations such as school teacher, in which there is large surplus of applicants, indicate a significant lack of job opportunities in the state for those seeking employment in those occupations.

Table 30
Active Applicants and Unfilled Job Openings
March 1981

Occupational Code, Category and Occupational Title	Total Applicants During 6 Months Ending 3/31/81	Total Active Applicants as of 3/31/81	Total Unfilled Job Openings as of 3/31/81	Ratio Of Active Applicants to Unfilled Job Openings as of 3/31/81
TOTAL	247,718	122,373	20,580	6/1
0-1 Professional, Technical and Managerial	35,517	15,616	2,470	6/1
Electronics Technician	418	204	33	6/1
Programmer, Business	273	128	22	6/1
Chemist	168	69	10	7/1
Counselor	995	410	29	14/1
Nurse, General Duty	261	151	134	1/1
Medical Assistant	190	98	0	--
Dental Assistant	283	153	8	19/1
Nurse, Licensed Practical	431	269	162	2/1
Faculty Member, College or University	276	113	16	7/1
Teacher, Secondary School	971	333	20	17/1
Teacher, Elementary School	985	323	2	162/1
Accountant	819	359	14	26/1
Purchasing Agent	332	178	12	15/1
Manager, Sales	691	322	11	29/1
Public Relations Repres.	346	141	11	13/1
Administrative Assistant	1,458	588	37	16/1
Manager, Office	667	294	5	59/1
Manager, Retail Store	1,350	635	31	20/1
Manager, Food Service	673	360	17	21/1
Security Officer	175	74	0	--
Caseworker	411	198	83	2/1
Social Group Worker	215	92	8	12/1
2 Clerical and Sales	59,533	26,252	4,186	6/1
Legal Secretary	538	262	22	12/1
Medical Secretary	283	155	6	26/1
Secretary	3,204	1,588	207	8/1
Clerk-Typist	2,822	1,479	350	4/1
Keypunch Operator	740	414	103	4/1
Typist	159	85	49	2/1
Survey Worker	309	79	70	1/1
File Clerk	858	566	27	21/1
Clerk, General	6,910	3,100	349	9/1
Mail Clerk	230	93	13	7/1
Bookkeeper (clerical)I Full Charge, General	1,473	731	32	23/1

Table 30
Active Applicants and Unfilled Job Openings
March 1981
(continued)

Occupational Code, Category and Occupational Title	Total Applicants During 6 Months Ending 3/31/81	Total Active Applicants as of 3/31/81	Total Unfilled Job Openings as of 3/31/81	Ratio Of Active Applicants to Unfilled Job Openings as of 3/31/81
2 Clerical & Sales(cont.)				
Bookkeeper (Clerical)II	607	302	18	17/1
Cashier (Clerical)I	1,273	666	33	20/1
Foreign Banknote Teller Trader	649	307	64	5/1
Cashier (Clerical)II	1,518	554	274	2/1
Computer Operator	638	299	24	12/1
Payroll Clerk	231	122	12	10/1
Accounting Clerk	956	437	33	13/1
Administrative Clerk	3,988	1,985	182	11/1
Stock Clerk	1,161	407	35	12/1
Telephone Operator	418	246	15	16/1
Receptionist	1,388	658	47	14/1
Teacher Aide II	595	293	12	24/1
Sales, Agent, Insurance	170	75	127	1/2
Salesperson, Women's Apparel & Accessories	320	144	24	6/1
Salesperson, Automobile General	290	136	7	19/1
Salesperson, General Merchandise	3,765	889	143	6/1
Salesperson, Parts	163	70	10	7/1
Sales Clerk	2,384	766	156	5/1
Sales Clerk, Food	521	185	65	3/1
Driver, Sales Route	388	177	10	18/1
Manager, Department	287	115	49	2/1
3 Services	39,065	20,918	4,134	5/1
House Worker, General	941	708	77	9/1
Counter Attendant, Luncheon or Coffee Shop	1,529	660	100	7/1
Cafeteria, Attendant	392	210	13	16/1
Bartender	943	533	9	59/1
Chef	294	151	5	30/1
Cook	1,081	514	78	7/1
Cook, Short Order	823	356	86	4/1
Cook	554	268	22	12/1

Table 30
Active Applicants and Unfilled Job Openings
March 1981

(continued)

Occupational Code, Category and Occupational Title	Total Applicants During 6 Months Ending 3/31/81	Total Active Applicants as of 3/31/81	Total Unfilled Job Openings as of 3/31/81	Ratio Of Active Applicants to Unfilled Job Openings as of 3/31/81
3 Services (continued)				
Meat Cutter	333	160	13	12/1
Cook Helper	153	85	0	--
Kitchen Helper	2,704	1,126	467	2/1
Cleaner, Housekeeping	610	368	66	6/1
Cosmetologist	411	300	2	150/1
Psychiatric Aide	340	121	243	1/2
Nurse Aide	3,846	2,423	167	15/1
Orderly	153	60	3	20/1
Food Service Worker, Hospital	437	221	83	3/1
Attendant, Children' Institutions	477	263	168	2/1
Nursery School Attendant	433	199	23	9/1
Presser, Machine	161	88	7	13/1
Guard, Security	1,194	528	296	2/1
Merchant, Patroller	506	208	86	2/1
Police Officer	160	79	1	79/1
Janitor	1,839	864	95	9/1
4 Agricultural, Fishery, Forestry & Related	3,997	2,118	1,434	1/1
Farmworker, Field Crop II	234	158	0	--
5 Processing	5,392	2,549	222	11/1
Injection-Molding Machine Tender	239	105	13	8/1
6 Machine Trades	17,043	8,020	773	10/1
Machinist	750	358	31	12/1
Machine Set-up Operator	227	102	10	10/1
Production Machine Tender	494	226	20	11/1
Automobile Mechanic	1,640	692	71	10/1
Airframes & Power Plant Mechanic	180	82	0	--
Diesel Mechanic	170	74	7	10/1
Maintenance Mechanic	505	247	25	10/1
Stitcher, Standard Machine	210	131	25	5/1

Table 30
Active Applicants and Unfilled Job Openings
March 1981

(continued)

	Occupational Code, Category and Occupational Title	Total Applicants During 6 Months Ending 3/31/81	Total Active Applicants as of 3/31/81	Total Unfilled Job Openings as of 3/31/81	Ratio Of Active Applicants to Unfilled Job Openings as of 3/31/81
7	Benchwork	15,718	8,285	905	9/1
	Electronics Inspector Systems-Quality Cont. I	196	110	5	22/1
	Electronics Assembler	1,938	957	166	6/1
	Electronics Inspector II				
	Checker-Parts	195	102	8	13/1
	Assembler, Electrical Accessories	316	160	29	6/1
	Assembler, Small Prod.	374	193	11	18/1
	Painter, Spray	159	79	8	10/1
	Sewer, Hand	153	79	5	16/1
	Sewing Machine Operator	867	471	88	5/1
	Cementer, Hand	165	96	10	10/1
8	Structural Work	21,960	10,719	923	12/1
	Sheet Metal Worker	328	171	43	4/1
	Shipfitter	205	69	6	11/1
	Automobile-Body Repairer	584	236	28	8/1
	Welder, Combination	255	112	11	10/1
	Electrician	340	146	64	2/1
	Electronics Mechanic	312	155	8	19/1
	Painter	1,128	609	22	28/1
	Operating Engineer	334	188	2	94/1
	Carpenter	1,661	794	41	19/1
	Bricklayer	186	113	10	11/1
	Pipe Fitter	160	77	1	77/1
	Plumber	174	67	11	6/1
	Plumber,Apprentice	196	80	1	80/1
	Laborer, Construction or Leak Gang	196	89	3	30/1
	Roofer	433	235	25	9/1
	Construction Worker I	2,861	1,381	78	18/1
	Maitenance, Repairer Building	1,503	712	80	9/1

Table 30
Active Applicants and Unfilled Job Openings
March 1981

(continued)

Occupational Code, Category and Occupational Title	Total Applicants During 6 Months Ending 3/31/81	Total Active Applicants as of 3/31/81	Total Unfilled Job Openings as of 3/31/81	Ratio Of Active Applicants to Unfilled Job Openings as of 3/31/81
9 Miscellaneous	34,566	16,391	2,295	7/1
Tractor-Trailer Truck Driver	1,254	647	7	92/1
Truck Driver, Heavy	2,579	1,327	28	47/1
Truck Driver, Light	1,710	798	30	27/1
Bus Driver	724	364	34	11/1
Taxi Driver	165	83	3	28/1
Automobile Service Station Attendant	575	256	45	6/1
Packager, Hand	3,814	2,116	142	15/1
Packager, Machine	358	177	12	15/1
Material Handler	10,747	5,030	339	15/1

Source: ESARS Table 96

Table 31
Characteristics of Active Applicants
Registered At Job Matching Service Centers
March 1981

	Active Applicants	
	Number	Percent
TOTAL	140,331	100.0
Age		
15 and Under	279	0.2
16-19	14,838	10.6
20-24	23,800	17.0
25-34	47,243	33.7
35-44	30,425	21.7
45-54	15,668	11.2
55-64	7,288	5.2
65 and Over	790	0.6
Sex		
Male	64,225	45.8
Female	76,106	54.2
Highest School Grade Completed		
0-7	8,323	5.9
8-11	47,229	33.7
12	55,977	39.9
Over 12	28,802	20.5
Residence		
Urban	125,833	89.7
Rural	14,498	10.3
Race/Ethnic Origin		
White (not Hispanic)	115,748	82.5
Black (not Hispanic)	13,958	9.9
Hispanic	9,088	6.5
All Others	1,537	1.1
Unemployment Claimants	42,999	30.6
State U.A.	40,859	29.1
Other Programs	2,140	1.5
Veterans	18,353	13.1
Recently Separated	4,279	3.0
Disabled	1,490	1.1
Vietnam Era	6,279	4.5
Handicapped	7,355	5.2
Physically Disabled	6,878	4.9
Mentally Retarded	179	0.1
Mentally Restored	298	0.2
Economically Disadvantaged	72,102	51.4
Food Stamp Work Registrant	10,411	7.4
Welfare Recipient	61,320	43.7
WIN Registrant	60,443	43.1
CETA Participant	813	0.6
Employment Status		
Working Full-time	8,604	6.1
Working Part-time	7,720	5.5
Not Working	124,007	88.4

Source: ESARS Table 6

VII. Individuals in Need of Employment Service

Individuals with low skill and educational levels are the most in need of manpower services. During periods of an economic recession many skilled and educated people also need manpower services. Skilled and educated workers are presumed to be able to find work on their own once the economic slowdown improves but the unskilled and under-educated will probably always need some form of assistance.

For many federally funded work force training programs, assistance is allocated to individuals on an income status basis. Poverty income levels and lower living standard income levels are established by the U. S. Department of Labor.

The Employment and Training Administration defines an economically disadvantaged person as someone who is a member of a family that 1) receives cash welfare payments; or 2) has a family income that, in relation to the family size and location, represents seventy percent of the lower living income levels issued by the department's Bureau of Labor Statistics, or poverty levels established by the Office of Management and Budget.

Table 32
Family Poverty Level Incomes

Size of Family Unit	One	Two	Three	Four	Five	Six
Nonfarm Family	$4,310	$5,690	$7,070	$8,450	$9,830	$11,210
Farm Family	3,680	4,850	6,020	7,190	8,360	9,530

For family units with more than six members, add $1,220 for each additional member in a nonfarm family, and add $1,030 for each additional member in a farm family

Table 33
Lower Living Standard Income Levels

Prime Sponsor (Metro)	Family Size					
	One	Two	Three	Four	Five	Six
Boston City	$5430	8890	12210	15080	17790	20800
EMHRDA Consortium	5430	8890	12210	15080	17790	20800
New Bedford Consortium	5160	8450	11600	14330	16900	19770
Hampden County Csrt.	5160	8450	11600	14330	16900	19770
Worcester Consortium	5160	8450	11600	14330	16900	19770
Salem Consortium	5430	8890	12210	15080	17790	20800
Lowell Consortium	5160	8450	11600	14330	16900	19770
Brockton Consortium	5430	8890	12210	15080	17790	20800
Fall River Consortium	5160	8450	11600	14330	16900	19770
Balance of State	5160	8450	11600	14330	16900	19770
Pittsfield Consortium	5160	8450	11600	14330	16900	19770

Table 34
70 Percent
Lower Living Standard Income Levels

Prime Sponsor (Metro)	Family Size					
	One	Two	Three	Four	Five	Six
Boston City	$3800	6230	8550	10550	12450	14560
EMHRDA Consortium	3800	6230	8550	10550	12450	14560
New Bedford Consortium	3610	5920	8120	10030	11830	13840
Hampden County Csrt.	3610	5920	8120	10030	11830	13840
Worcester Consortium	3610	5920	8120	10030	11830	13840
Salem Corsortium	3800	6230	8550	10550	12450	14560
Lowell Consortium	3610	5920	8120	10030	11830	13840
Brockton Consortium	3800	6230	8550	10550	12450	14560
Fall River Consortium	3610	5920	8120	10030	11830	13840
Balance of State	3610	5920	8120	10030	11830	13840
Pittsfield Consortium	3610	5920	8120	10030	11830	13840

The Not-Yet Poor Unemployed

In Fiscal Year 1982, displaced government workers including teachers and professors will be in need of job counseling to reconsider career alternatives or relocation. Not since the NASA-Defense layoffs of 1970 will the ranks of the experienced unemployed include so many white collar individuals. As in Space cutbacks, articulate, well-educated, and disillusioned professionals will need workshops on job search techniques. At first the job seekers will be stunned. Employers may react as they did in 1970 that these unemployed professionals will "go back to their old profession when things improve". A great number of the engineers and mathematicians who were displaced in 1970 found completely new career tracks to which they are committed and from which they cannot be enticed.

Massachusetts, Persons 14 years and older

Table 35

Numbers in Thousands	Civilian Noninstitutional Population	Eligible for Title								
		IIB,VII	IID	YETP	YCCIP	SYEP	VI	Any Listed	Any Youth	Other Listed
Age in Years										
Total 14 years and older	4,620	491	419	92	52	139	426	556	177	504
14 to 15	204	31	19	-	-	31	19	31	31	31
14 to 19	666	89	59	65	52	103	59	139	139	98
Total 16 years and older	4,417	460	400	92	52	108	407	525	146	473
16 to 21	672	86	62	92	52	108	62	146	146	95
16 to 19	462	58	40	65	52	72	40	108	108	66
20 to 21	210	28	22	27	-	36	22	39	39	28
22 to 44	1,949	194	164	-	-	-	172	198	-	198
22 to 39	1,631	175	149	-	-	-	155	178	-	178
40 to 44	318	18	15	-	-	-	17	20	-	20
45 to 54	592	53	52	-	-	-	52	53	-	53
55 to 64	561	39	35	-	-	-	35	39	-	39
65 and over	643	88	87	-	-	-	87	88	-	88
Sex										
Male	2,213	193	152	52	33	76	157	225	97	197
Female	2,408	298	267	40	19	62	269	331	80	307
Race-Ethnicity										
White	4,425	453	389	82	50	124	394	515	162	465
White, not Hispanic	4,348	422	358	75	49	111	364	480	149	433
Black	148	38	29	9	2	15	31	39	15	38
Black, not Hispanic	139	32	25	9	2	13	26	33	13	32
Hispanic	86	36	35	7	1	15	35	39	15	38
Total minority	272	69	61	17	2	27	63	76	29	71
Economic Status										
≤ Poverty level	479	282	228	52	15	93	230	301	93	289
≤ Pov level or ≤70% LLSIL	573	328	254	64	18	111	257	348	111	335
≤70% LLSIL	548	321	250	62	17	109	253	341	109	328
>70% and ≤85% LLSIL	171	26	24	17	5	10	24	37	20	27
>85% and ≤100% LLSIL	242	16	16	-	5	-	21	26	5	21
>100% LLSIL	3,659	128	128	13	26	20	128	152	44	128
Years of School Completed										
Under 9 years	737	162	144	13	6	36	145	173	44	163
9 - 11 years	819	133	117	51	31	65	120	168	87	142
12 years	1,665	149	128	21	15	26	131	168	36	152
13 - 15 years	676	40	26	7	-	12	26	40	12	40
16 or more years	724	8	4	-	-	-	4	8	-	8

Source: University of Michigan

Table 36
Additional Planning Data Projections
Fiscal Year 1982

	Economically Disadvantaged 18 Years and Over		
	Statewide	Balance of State CETA Prime Sponsor (Including Yarmouth Subgrantee)	Balance of State CETA Prime Sponsor (Excluding Yarmouth Subgrantee)
TOTAL	472,509	184,369	173,875
White	412,847	176,870	166,911
Black	36,071	3,463	3,215
Other	23,591	4,036	3,749
Spanish	21,759	3,724	3,628

	Employed Part-time For Economic Reasons	
	Statewide	Balance Of State
Total	126,349	70,532
White Male	50,793	30,505
White Female	67,104	38,257
Nonwhite Male	3,727	818
Nonwhite Female	4,725	952

VIII. Training Opportunities for Massachusetts Labor Force

The outlook for employment and training programs for Massachusetts in Fiscal Year 1982 has been somewhat dampened by the impending Federal cutbacks in these areas. Some programs will be eliminated, while others will operate with considerably less money. Exactly what will be funded for training in Fiscal Year 1982 is not known at this time. Therefore, we will describe what is available as of March 1981. The goal of these programs are to train and improve the employability and productivity of the state's labor force.

A. Work Incentive Program (WIN)

The Work Incentive Program (WIN) was originally created by the 1967 amendments to the Social Security Act but was significantly changed by the 1971 Amendment to the Act. WIN is jointly administered by the U. S. Department of Labor and the U.S. Department of Health and Human Services through the state employment agencies all over the country.

The 1971 amendments mandated the requirements that all persons applying for or receiving Aid to Families with Dependent Children (AFDC) must register with the WIN program for employment or training as a condition of eligibility for AFDC. The WIN program is a major effort to help those people receiving AFDC to become productive workers. The program provides social, medical and childcare services and offers counseling, employability planning, work and training assignments, job placement and other assistance. The major emphasis of the program is putting individuals into immediate job placement rather than on counseling or extensive institutional training; thus, the AFDC recipients receive more emphasis on seeking employment rather than just receiving their AFDC welfare payment. The program is represented by 36 teams throughout Massachusetts.

An interesting aspect of the WIN program is the number of individuals in working registrants status. A working registrant is a sole parent who is employed more than 30 hours a week and who received an AFDC supplement to wages earned. They will be deregistered from the WIN program when their wages (after pay raises and promotions) reach a level which makes them ineligible to receive AFDC payments. Over 25 percent of WIN registrants are in working registrants status, an incremental approach to economic self-sufficiency. An additional four percent are in subsidized employment, are no longer receiving AFDC payments, and will be deregistered from the program.

B. Comprehensive Employment and Training Act (CETA)

The Comprehensive Employment and Training Act of 1973 was developed in Massachusetts to establish a new community employment service system to aid persons in job placement as well as providng them with training and other supportive services. There are eleven Prime Sponsors, ten of which represent consortia or municipalities based on the following cities: Boston, Cambridge, Fall River, Worcester, Springfield, Lowell, New Bedford, Brockton, Pittsfield, Salem, plus a sponsor - the Balance of State.

The CETA Act of 1973 was implemented in Massachusetts with the purpose of identifying and allotting funds to target groups which are experiencing job-related problems. Some of these target groups are the long-term unemployed, economically disadvantaged, ex-offenders, older workers, persons with a limited knowledge of the English language, and Vietnam-era Veterans.

CETA Eligibility Information

Title IIB: Services available under this Title include: Orientation, Assessment (including Testing), Classroom Occupational Training, On-the-Job Training, Work Experience, Individual Referral to short term public and private vocational training courses and job development. Basic Education, English as a Second Language and GED courses are also available, in combination with vocational training, for employability improvement. All of these services are designed to improve the employability of participants within relatively short periods of time. At this time, there are no provisions for remedial education or vocational training courses which would require a great length of time.

Eligibility:

Applicants must be:

1. Economically disadvantaged and unemployed or underemployed and a member of a significant segment.
2. Willing and able to participate in ES/CETA services programs.
3. Lacking a marketable skill.

Limits Participation:

1. No one can be in any CETA program longer than 2-2½ years in a five-year period.

2. No one can be in PSE longer than 78 weeks in a five-year period. There also is a waiver for on-board enrollees at the Secretary's discretion if a prime sponsor is having a extreme hardship in placing PSE enrollees in unsubsidized jobs, or if the area has 7 percent or more unemployment.

   PSE wages may not exceed $10,000 per year, adjusted upward by the ratio that local wage rates bear to national average, but not to exceed 20 percent of the maximum (no more than $12,000), with some exceptions. Further, average wages in each prime sponsor area may not exceed $7,200, adjusted by the ratio that the local wage bears to the national average.

Title III Special Federal Responsibilities:

Programs for persons who have a particular disadvantage in the labor market, including Native Americans, migrants and other seasonal farmworkers, the handicapped, women, displaced homemakers, public assistance recipients, and other special target groups.

Authorized welfare demonstration projects, projects for the middle-aged and older workers, and a program for better coordination between prime sponsors and state employment security agencies are included.

Title IV Youth Programs:

The Job Corps, Summer Youth Programs, and programs enacted in the Youth Employment and Demonstration Project Act of 1977 (except the Young Adult Conservation Corps which is still Title VIII), namely, Youth Incentive Entitlement Pilot Projects, and Youth Employment and Training Programs. The Job Corps and Summer Youth Programs are authorized for 4 years, and the 3 new Youth Programs for 2.

1. The Youth Employment Training Program (YETP): under the CETA Act, involves such services as classroom and on-the-job training, testing, placement, and work experience programs for youth ages 16 to 21, who meet certain low income criteria. The YETP pays firms to train young people in specific job-related skills.

2. Youth Incentive Entitlement Pilot Projects: The purpose of the Youth Incentive Entitlement Pilot Projects under the CETA Act is to test the impact on high school return, retention, and completion rates of a job guarantee for 16 to 19 year old disadvantaged youth who are in school or willing to return. The program provides wage subsidies for companies who offer new part-time jobs, or part-time jobs and training for these youth after school and during summer vacations. Participation of Massachusetts firms in this program encourages young people to complete their education and at the same time eases their transition into the work force.

3. Youth Community Conservation and Improvement Project: This is a CETA Program which seeks to employ 16-19 year olds in work projects which will benefit the community. Business, public and private agencies, schools, and other community based public organizations work together to design and operate subjects that provide youth with employment, work experience, skill training and opportunities for community service.

Title VII Private Sector Opportunities for the Economically Disadvantaged: Authorized a Private Sector Initiative Program (PSIP) to demonstrate the effectiveness of ways of increasing the involvement of the business community, including minority and small businesses,in employment and training activities supported by CETA, and increase private sector jobs for the economically disadvantaged.

Provides funds for the establishment of private industry councils (a majority of whose members must be from the business community) which shall participate with prime sponsors in developing opportunities for economically disadvantaged persons in the private sector.

C. Apprenticeship Programs:

Apprenticeship programs are conducted as a joint effort by employers and schools with related instruction given in vocational schools and junior colleges, sometimes utilizing home study courses. During the duration of the program, study records are kept and the training progress of the apprentices are frequently evaluated. All apprenticeship programs in the Commonwealth must be approved by and registered with the State Division of Apprentice Training.

Both men and women are eligible to apply, both must be at least 16 years of age. The applicants must be physically able to do the work of the trade. There are approximately 415 apprenticeable trades, many being specialized jobs within certain occupations.

D. Job Corps - How It Works

A national system of 60 residential centers in 31 States and Puerto Rico provides basic education, vocational training, counseling, health care, and similar renewal services to help disadvantaged young men and women, 16 through 21, prepare for jobs and for responsible citizenship.

Enrollees in Job Corps residential centers receive room and board, clothing for work and dress, books and other learning supplies, and a cash allowance, part of which is paid on leaving the program after satisfactory participation. A few of the centers can also accommodate young people who do not live on center but take training during the day. Enrollees may stay in Job Corps as long as 2 years, and at the end of their stay are given assistance in finding a job.

Training, often by skilled union workers, is given in such occupations as heavy equipment, auto repair, carpentry, painting, masonary, nursing and other health care jobs, clerical and office work, and electronic assembly. Basic education includes reading, mathematics, social studies, and preparation for the General Education Development (GED) high school equivalency examination.

Table 37

INDIVIDUALS 03/31/81 MASSACHUSETTS STATE MASSACHUSETTS

SELECTED WIN ACTIVITY BY CHARACTERISTICS OF REGISTRANTS

ITEM NO	CHARACTERISTICS OF APPLICANTS	REGISTRANTS		ENTERED EMPLOYMENT			TAX CREDITS	DEREGISTRATIONS					
		CUMULATIVE TOTAL	ON HAND END OF PERIOD	TOTAL	PLACED	OBTAINED EMPLOYMENT	AUTHORIZED	EMP AFT REG OFF AFDC	EMP VOL NOT OFF AFDC	NEVER AFDC RECIPIENT	EXEMPT	SANCTIONED	OFF AFDC OTHER	TOTAL
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
30010	AGE	72998	60539	6431	1143	5361	991	2038	24	831	1761	216	8560	13352
30015	15 AND UNDER	43	36	2	0	2	1	2	0	1	0	0	5	6
30017	16-17	2618	2099	204	62	147	36	68	0	18	74	15	380	552
30018	18-19	1725	1172	126	40	89	32	82	0	22	44	10	413	567
30020	20-21	1541	1178	189	48	143	42	94	3	38	52	6	218	407
30025	22-24	4045	3165	481	112	379	90	170	6	70	125	19	574	958
30030	25-29	11887	9826	1273	231	1051	235	402	12	169	283	54	1326	2232
30035	30-34	16092	13646	1530	246	1303	210	427	3	164	363	35	1659	2640
30037	35-39	13994	11905	1293	187	1117	173	333	0	134	313	36	1439	2240
30040	40-44	9420	7989	693	118	583	98	210	0	96	189	19	1034	1542
30045	45-54	9389	7706	568	86	488	63	220	0	101	247	20	1193	1768
30050	55-64	2104	1703	68	13	55	11	28	0	1	69	2	297	414
30055	65 AND OVER	140	114	4	0	4	0	2	0	0	2	0	22	26
30060	SEX	72998	60539	6431	1143	5361	991	2038	24	831	1761	216	8560	13352
30065	MALE	17457	12778	1941	403	1563	419	1191	1	499	264	104	3053	5066
30070	FEMALE	55541	47761	4490	740	3798	572	847	23	332	1497	112	5507	8286
30075	HIGHEST SCHOOL GRADE	72998	60539	6431	1143	5361	991	2038	24	831	1761	216	8560	13352
30080	0-7	6622	5568	352	92	268	82	121	0	72	234	23	685	1126
30085	8-11	30437	25203	2490	485	2030	430	766	6	297	816	127	3629	5610
30090	12	27907	23278	2679	459	2256	377	800	13	323	579	51	3225	4960
30095	OVER 12	8032	6490	910	107	807	102	351	5	139	132	15	1021	1656
30100	RACE/ETHNIC	72998	60539	6431	1143	5361	991	2038	24	831	1761	216	8560	13352
30105	WHITE (NOT HISPANIC)	54633	44524	5375	957	4477	818	1784	22	692	1238	147	7061	10879
30110	BLACK (NOT HISPANIC)	10887	9711	678	92	591	86	122	1	65	280	18	762	1242
30112	HISPANIC	7034	5942	353	91	271	83	121	1	73	238	51	669	1146
30115	AMERICAN INDIAN & ALASKAN NATIVE	87	69	3	0	3	1	3	0	0	2	0	16	21
30120	ASIAN & PACIFIC ISL.	248	200	19	2	17	2	6	0	0	2	0	40	48
30125	INA	109	93	3	1	2	1	2	0	1	1	0	12	16
30127	FAMILY SIZE	72998	60539	6431	1143	5361	991	2038	24	831	1761	216	8560	13352
30128	1-2	15935	13425	1743	318	1448	256	360	15	179	509	49	1663	2757
30129	3-4	46582	38631	3713	634	3117	555	1269	9	466	916	106	5703	8422
30130	5-8	10162	8206	959	187	784	175	405	0	185	323	59	1170	2129
30131	9 OR MORE	319	277	16	4	12	5	4	0	1	13	2	24	44
30135	FOOD STAMP WORK REG.	678	161	61	9	54	16	20	0	20	7	8	59	113
30140	EMPLOYMENT STATUS	72998	60539	6431	1143	5361	991	2038	24	831	1761	216	8560	13352
30145	FULL TIME	6464	5580	497	87	413	91	260	4	87	61	3	560	972
30150	PART TIME	5670	4950	491	60	437	53	142	1	76	72	4	515	806
30155	NOT WORKING	60864	50009	5443	996	4511	847	1636	19	668	1628	209	7485	11574
30160	JOB ATTACHMENT	379	293	40	4	36	4	14	0	14	2	0	65	94
30165	APPLICANTS FOR AFDC	13407	3722	511	64	447	27	22	1	437	156	13	590	1217
30170	MANDATORY	12741	3569	492	61	431	26	22	-	435	141	13	569	1178
30171	UNEMPLOYED PARENTS	2962	518	121	17	104	3	7	-	235	15	5	145	406
30175	VOLUNTARY	675	153	19	3	16	1	0	1	2	15	0	22	40
30180	RECIPIENTS	68295	56817	5948	1081	4932	964	2016	23	-	1607	203	7977	12179

MONTHLY YEAR TO DATE

FOR PERIOD ENDING 03/31/81

INDIVIDUALS 03/31/81 MASSACHUSETTS STATE MASSACHUSETTS

SELECTED WIN ACTIVITY BY CHARACTERISTICS OF REGISTRANTS

ITEM NO	CHARACTERISTICS OF APPLICANTS	REGISTRANTS		ENTERED EMPLOYMENT			TAX CREDITS	DEREGISTRATIONS						
		CUMULATIVE TOTAL	ON HAND END OF PERIOD	TOTAL	PLACED	OBTAINED EMPLOYMENT	AUTHORIZED	EMP REG OFF AFDC	AFT EMP NOT OFF AFDC	VOL. OFF	NEVER AFDC RECIPIENT	EXEMPT	SANCTIONED	OFF AFDC OTHER	TOTAL
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
30185	MANDATORY	64356	53505	5609	991	4679	897	1967	-	-	1343	203	7617	1147
30186	UNEMPLOYED PARENTS	8240	5862	1178	229	959	234	616	-	-	140	63	1263	239
30190	VOLUNTARY	4107	3312	339	90	253	66	48	22	-	264	0	361	70
30195	PREVIOUS WIN REGISTRANT	15678	13170	1526	261	1286	245	519	3	153	355	69	1690	277
30196	DEREGISTERED FOLLOWING EMPLOY	1466	1118	264	53	216	70	110	1	43	19	21	177	39
30200	PLACED	1143	-	-	-	-	302	204	4	2	15	3	67	29
30205	OBTAINED EMPLOYMENT	5363	-	-	-	-	272	772	5	13	29	8	331	115
30210	TOTAL MANDATORY	68878	-	-	-	-	-	-	-	-	-	-	-	-
30215	UNEMPLOYED PARENTS	9112	-	-	-	-	-	-	-	-	-	-	-	-
30220	TOTAL VOLUNTEERS	4300	-	-	-	-	-	-	-	-	-	-	-	-
30225	SERVICES PROVIDED	1692	-	263	52	214	-	53	6	9	102	16	163	347
30230	CHILD CARE	1272	-	209	44	167	-	31	6	7	67	11	116	236
30235	HOMEMAKER SERVICES	0	-	0	0	0	-	0	0	0	0	0	0	0
30240	WIN SAU MEDICAL EXAMINATION	132	-	18	4	14	-	5	0	2	27	3	8	45
30245	FAMILY PLANNING	3	-	0	0	0	-	0	0	0	1	0	0	1
30250	HOME AND FINANCIAL MANAGEMENT	11	-	0	0	0	-	1	0	0	1	0	0	2
30255	COUNSELING	183	-	24	2	22	-	6	0	0	2	1	22	31
30260	HOUSING IMPROVEMENT	21	-	5	2	4	-	2	0	1	0	0	3	6
30265	TRANSPORTATION TO SERVICES	10	-	3	0	3	-	0	0	0	0	0	3	3
30270	EMERGENCY INTERVENTION	4	-	0	0	0	-	0	0	0	0	0	2	2
30275	REMEDIAL MED/DENTAL	60	-	5	1	4	-	7	0	0	4	1	9	21
30280	VOC REHABILITATION	11	-	1	0	1	-	1	0	0	0	0	1	2
30285	STATE USE I	4	-	0	0	0	-	0	0	0	0	0	0	0
30290	STATE USE II	0	-	0	0	0	-	0	0	0	0	0	0	0
30295	FEDERAL USE	0	-	0	0	0	-	0	0	0	0	0	0	0

INDIVIDUALS 03/31/81 MASSACHUSETTS STATE MASSACHUSETTS

NTRANCE TO EMPLOYMENT BY SERVICES RECEIVED

ITEM NO	EMPLOYMENT CATEGORIES AND OTHER ITEMS	TOTAL	ENTERED EMP APPLI-CANTS	ENTERED EMPLOY EMP AND TRNG COMP	NO COMP. PARTI-CIPA-TION	OJT	ENTERED EMPLOYMENT FROM: PSE	SUS-PENSE TO EMPLOY-MENT	IES	IES/ GROUP JOB SEEKING ACTIV.	MANDA-TORY	MINORITY FEMALE	UNDER 18	EDUC. LESS THAN 12
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
31010	ENTERED EMPLOYMENT	6431	511	1421	4527	186	0	76	72	373	6075	825	16	562
31015	30 DAYS OR MORE	6393	508	1414	4498	186	0	76	72	369	6039	821	15	560
31020	PLACED	1121	63	370	690	160	0	8	36	14	1029	141	5	107
31025	OBTAINED EMPLOY-MENT	5342	445	1070	3844	26	0	68	36	355	5075	691	11	463
31030	FULL TIME	4756	358	1214	3200	183	0	70	52	333	4499	624	14	445
31035	PART TIME	1713	150	217	1348	3	0	6	20	38	1609	204	2	121
31040	LESS THAN 30 DAYS	47	3	10	34	0	0	0	0	4	45	4	1	3
31042	DEREGISTERED FOLLOW-ING EMPLOYMENT	264	28	49	189	8	0	4	0	14	261	15	1	17
31045	MANDATORY	6075	492	1313	4296	169	0	73	67	349	6075	771	16	541
31050	UNEMPLOYED PARENTS	1294	121	310	868	67	0	11	5	109	1294	8	1	71
31055	VOLUNTARY	356	19	108	231	17	0	3	5	24	0	54	0	21
31060	MALE	1941	190	458	1302	89	0	13	19	160	1929	0	9	119
31065	FEMALE	4490	321	963	3225	97	0	63	53	213	4146	825	7	443
31070	AGE	6431	511	1421	4527	186	0	76	72	373	6075	825	16	562
31072	15 AND UNDER	2	0	0	2	0	0	0	0	0	2	0	0	0
31075	16-17	204	21	32	152	1	0	3	6	3	202	7	16	16
31079	18-20	190	22	35	133	6	0	2	1	11	161	12	0	15
31080	21-44	5395	411	1234	3775	165	0	63	61	321	5080	713	0	452
31085	45 AND OVER	640	57	120	465	12	0	8	4	38	630	93	0	79
31090	HIGHEST SCHOOL GRADE COMPLETED	6431	511	1421	4527	186	0	76	72	373	6075	825	16	562
31095	0-7	352	15	73	264	14	0	2	11	16	347	104	1	126
31100	8-11	2490	190	576	1733	70	0	33	36	172	2394	339	15	436
31105	12	2679	211	580	1902	82	0	33	19	143	2492	276	0	0
31110	OVER 12	910	95	192	628	20	0	8	6	42	842	106	0	0
31111	FAMILY SIZE	6431	511	1421	4527	186	0	76	72	373	6075	825	16	562
31112	1-2	1743	143	392	1219	47	0	23	20	102	1559	252	3	110
31113	3-4	3713	293	807	2628	113	0	41	38	199	3558	458	9	326
31114	5-8	959	72	219	670	26	0	11	14	72	942	114	4	125
31115	9 OR MORE	16	3	3	10	0	0	1	0	0	16	1	0	1
31117	UNDER $3.10	207	14	19	174	0	0	0	3	4	195	12	0	7
31120	$3.10 - $3.34	1392	124	209	1061	6	0	11	20	35	1306	161	7	123
31125	$3.35 - $3.49	1040	62	193	786	9	0	7	11	77	987	153	5	104
31130	$3.50 - $3.99	1402	89	358	957	46	0	23	19	80	1290	258	3	173
31135	$4.00 - $4.49	979	65	294	620	50	0	19	8	72	915	120	2	81
31140	$4.50 AND OVER	1589	157	400	1035	75	0	16	11	111	1543	146	0	95
31145	COMPONENTS ENTERED	1421	-	1421	-	-	-	-	-	-	-	204	4	153
31150	IES	110	-	110	-	-	-	-	-	-	-	27	2	28
31155	IES/GROUP JOB SEEKING ACTIVITY	463	-	463	-	-	-	-	-	-	-	54	1	41
31160	INSTITUTIONAL	113	-	113	-	-	-	-	-	-	-	22	0	13
31165	WORK EXPERIENCE	131	-	131	-	-	-	-	-	-	-	23	0	17

MONTHLY YEAR TO DATE
FOR FERIOD ENDING 03/31/81

Table 39
Followup Distribution of Selected Vocational-Technical School Graduates
Class of 1980

Schools	Number Of Graduates	2 Year Public College	4 Year Public College	2 Year Private College	4 Year Private College	Nurses Training	Other Post Secondary	Military	Work	Other	Information Not Available
C.H. Patten Voc.High (Beverly)	72	1	1	0	0	0	0	7	63	0	0
Boston Tech. High	294	5	62	24	98	0	18	24	61	2	0
Chicopee Comprehensive H.S.	423	76	51	8	47	4	10	18	195	14	0
Holyoke Trade High School	52	0	0	0	0	0	0	7	44	1	0
Leominster Trade High School	53	1	0	2	0	0	0	2	48	0	0
Voc. Tec. Inst. (Lynn)	298	19	18	0	0	0	8	14	160	4	75
Medford Voc. Tech. Hich School	106	2	1	6	0	0	0	2	94	1	0
Peabody Voc. High	70	0	0	0	0	0	11	0	59	0	0
Taconic High (Pittsfield)	268	88	30	8	42	1	8	11	69	11	0
Pittsfield Vocational	133	18	2	0	1	0	1	18	93	0	0
Quincy Voc. Tech.	210	14	5	8	10	2	2	8	147	1	13
Somerville Tech. Trade High	62	0	0	0	1	0	0	3	51	7	0
H.S. Of Commerce (Springfield)	383	78	18	8	34	0	13	24	189	8	11
Technical High (Springfield)	265	52	33	10	16	5	2	40	107	0	0
Putnam Voc. Tech. (Springfield)	272	19	2	3	1	0	0	33	212	2	0
Waltham Voc. High	165	10	6	16	10	13	0	9	86	0	15
Westfield Voc. High	72	8	0	0	0	0	0	4	59	1	0
Weymouth Voc. Tech. High	95	1	3	3	6	0	6	7	69	0	0
Smith Voc. Agr. High (Northampton)	126	15	0	0	0	0	0	17	69	25	0
Worcester Trade Complex	313	38	16	8	0	8	7	51	176	3	6
Dighton Rehoboth Rec. Voc.	223	18	40	3	37	1	9	11	104	0	0
Tantasqua Reg. Voc.(Sturbridge)	27	2	1	0	0	0	0	2	18	4	0
Assabet Valley Voc. High (Marlborough)	292	11	15	11	4	14	7	13	204	13	0

Table 39
Followup Distribution of Selected Vocational-Technical School Graduates
Class of 1980
(continued)

Schools	Number Of Graduates	2 Year Public College	4 Year Public College	2 Year Private College	4 Year Private College	Nurses Training	Other Post Secondary	Military	Work	Other	Information Not Available
Blackstone Voc. Tech. (Upton)	168	19	2	8	2	0	1	17	97	22	0
Blue Hills Reg. Voc. Tech. (Canton)	302	68	8	14	8	0	4	14	161	16	9
Bristol Plymouth Voc. Tech. (Taunton)	161	4	0	2	5	2	4	18	116	10	0
Cape Cod Reg. Voc. Tech. (Harwich)	168	15	0	6	2	0	5	15	121	0	4
Franklin County Tech. (Turner Falls)	154	0	1	13	0	0	1	4	123	6	6
Dimar-Reg. Tech. (Fall River)	216	6	15	4	2	0	2	15	171	1	0
Gr. Lawrence Reg. Voc. Tech. (Andover)	360	34	23	4	0	2	3	4	283	5	2
Gr. New Bedford Reg. Voc. Tech. (New Bedford)	319	20	9	3	2	1	10	19	255	0	0
Gr. Lowell Reg. Voc. Tech. (Tyngsborough)	482	20	3	8	2	14	11	21	392	11	0
Jos. P. Keefe Tech. (Framingham)	220	3	6	3	9	0	9	13	174	3	0
Minuteman Voc. Tech. (Lexington)	227	12	10	12	7	0	20	13	131	22	0
Montachusett Voc. Tech.(Fitchburg)	192	9	5	1	1	0	4	8	163	1	0
Charles H. McCann Tech. No. Adams)	100	18	7	2	0	0	3	6	63	1	0
Northeast Metro Reg. Voc. (Wakefield)	284	2	6	7	11	0	1	2	235	16	4

Table 39
Followup Distribution of Selected Vocational-Technical School Graduates
Class of 1980
(continued)

Schools	Number Of Graduates	2 Year Public College	4 Year Public College	2 Year Private College	4 Year Private College	Nurses Training	Other Post Secondary	Military	Work	Other	Information Not Available
Northshore Reg, Voc. (Beverly)	169	6	0	0	3	0	14	17	129	0	0
Old Colony Reg. Voc. (Rochester)	103	10	2	2	5	0	0	1	81	2	0
Pathfinder Voc. Tech. (Palmer)	57	5	0	1	0	0	0	2	49	0	0
Shawsheen Valley Voc. Tech. (Billerica)	354	9	4	2	6	0	0	13	293	17	10
Southeastern Reg. Voc. Tech. (South Easton)	247	11	7	10	2	5	6	15	172	19	0
South Shore Voc. Tech. (Hanover)	65	3	3	0	4	0	0	10	45	0	0
Bay Path Voc. High (Worcester)	188	0	20	0	0	0	0	25	83	7	53
Upper Cape Cod Voc. Tech. (Bourne)	117	9	6	4	0	1	7	9	72	9	0
Whittier Reg. Voc. (Haverhill)	363	8	8	12	4	17	25	7	267	10	5
Total	9290	767	449	236	382	90	232	593	6053	275	213
Percent of Distribution	100.0	8.3	4.8	2.5	4.1	1.0	2.5	6.4	65.1	3.0	2.3

Source: Massachusetts Department of Education

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Skill Training Centers

City or Town	Name Of Institution	Telephone	Training Program
Attleboro	Attleboro Voc. Tech High School	(617)223-5050	Jewelry Skill Training
Amherst	Univ. of Mass.	(413)545-2132	Residential Energy Auditing, Passive Solar Design, Real Estate Appraisal, Real Estate Certification
Bedford	Middlesex Collunity College	(617)275-8910	Technical Writing,Electro-mechanical Drafting, Career Transition, Word Processing, Entry/Reentry to the Job Market
Beverly	North Shore Community College	(617)427-4580 ext. 318	Materials Management for Technicians (electrical or mechanical), Machine Operator
Billerica	Shawsheen Valley Voc. High School	(617)667-2111	Cobol Programming, Electronic Technician/Computer Operator, Word Processing
Boston	Boston State College	(617)731-3300 ext. 110,101	Paralegal Studies, Computer Science and Information Processing, Public Accounting
Boston	CETA	(617)725-3665	Clerical, Keypunch Computer/ Elec. Tech., Multi-lingual Accounting, Food Service, Welding, Machine-Tool, Automotive
Bridgewater	Bridgewater State College	(617)697-8321 ext. 231	Accounting, Computer Science, Paralegal Studies, Advertising Retail Management
Brockton	CETA	(617)588-8951	Building Maintenance, Electronic Assembler, ESL (English as a second language) Clerk-typist, Machine and Auto Mechanics

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Skill Training Center
(continued)

City or Town	Name Of Institution	Telephone	Training Program
Cambridge	CETA	(617)357-9510 ext. 301	Clerical Training for the Handicapped
Chelsea	CETA	(617)884-1755 ext. 234	Diesel Mechanic, Machine Operator, Electronics
Fall River	Bristol Community College	(617)678-2811 ext. 279	Computer Operations, and Maintenance, Computer Programming, Electro-Mechanical Drafting, Clerics Upgrading Program, ESL (English as a second language)
Fitchburg	CETA	(617)632-3193	Business Tech., Computer Operator
Fitchburg	Fitchburg State College	(617)345-2343	Certificate Programs in Computer Hardware, Micro-processors, Plastic Technology and Technical Writing
Framingham	Framingham State College	(617)620-1441	Computer Programming
Haverhill	Northern Essex Community College	(617)374-0721 ext. 245	Computer Programming, Accelerated Business, Electronic Tester Training
Holyoke	Holyoke Community College	(413)538-7000	Clerical Skills, Data Processing
Hopedale	CETA	(617)473-3972	Secretarial and Clerical Training
Lawrence	Lawrence Public Schools	(617)682-9020	Metal Fabrication

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Skill Training Center
(continued)

City or Town	Name Of Institution	Telephone	Training Program
Lexington	Minuteman Tech.	(617)861-6500 ext. 230	Florist shop training, Word Processing, Photo-typesetting, Mechanical Paste-up Artist, Electronics Test Technician, Drafting, Data Processing, Training for Medical, Dental and other Health Occupations
Lowell	Greater Lowell Reg. Voc. Tech.	(617) 454-5411	Electronics Technicians
Marlborough	Assabet Valley Reg. Voc. School	(617)485-9430 ext. 29	Computer Programming, Draftin Electronics, Secretarial
Natick	Natick H.S.	(617)653-0550	Word Processing
New Bedford	CETA	(617)999-3161	Clerical Skills Training, Jr. Accounting, Nurse's Aide, Basic Education, ESL (English as a second language), Machine shop Occupations, Carpentry/Bldg. Maintenance, Auto-Mechanics, Welding, Drafting, Boat Building, Basic Elect. Program
Newton	Newton H.S.	(617)552-7590	Electromechanical Drafting
Oxford	Oxford H.S.	(617)987-0246	Computer Programming, Word Processing, Electronic Technology, Electronics Assembly
Pittsfield	CETA	(413)499-2220	Carpentry, Welding, Food Services, Auto Body, Homemake Health Adie, Child Care

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Skill Training Center
(continued)

City or Town	Name Of Institution	Telephone	Training Program
Salem	CETA	(617)745-9280	Janitoral Svcs. Career Development Program, Health Aide, Med. Sect.,Acct/ Bookkeeping,Admin. Asst., Jr. Acct., Adm. Sec., Auto Mech., Elec.Assembly/Insp., Data Entr Bus. Office Prod., Elec. Tech. I., Elec. Tech II, Manuf. Tec., Machine Operator
Southbridge	CETA	(617)765-5404	Machine Shop Skills
Springfield	Springfield Community College	(413)781-7822	Environmental Technology, Electronics, Machine Operator, Secretary/Clerical
Upton	Blackstone Valley Reg. Voc. School	(617)529-7771	Machine-Tool Operator
Wellesley	Mass. Bay Community Coll.	(617)237-1100 ext. 214	Word Processing Concepts, Office Skills, Medical Records
Westfield	Westfield State College	(413)568-3311 ext. 228	Writing Proficiency, Computer Science, Occupational Education Administration, Training for Vocational Inst. of Special Needs Students, Bilingual Vocational Education
Worcester	Worcester State College	(617)752-7700 ext. 307	Review for ASHA(American Speech-Hearing Assoc.) Certification Exam., Alternatives t Teaching, Career Seminar, Skills for Math. Success
Worcester	Career Educ. Training Ctr. GETC	(617) 757-5636	Patient Care, Computer Technician, Cooking, Business Skills Training, Med. Records, Machine Skills Training

A P P E N D I X

Massachusetts Accession Rates
1980

Item	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1980 Annual Average
TOTAL MANUFACTURING	4.0	3.5	3.7	3.2	3.4	4.2	3.2	3.9	3.8	3.3	2.6	2.2	3.4
Durable Goods	3.6	2.7	2.9	2.6	2.7	3.5	2.3	2.8	2.9	2.2	1.9	1.6	2.6
Lumber & Wood Prod.	7.8	3.9	6.8	6.4	5.7	3.9	4.5	8.6	4.0	4.4	4.1	2.3	5.2
Furniture & Fixtures	3.9	4.4	3.1	3.6	5.7	2.8	6.5	3.0	5.8	3.4	3.5	2.4	4.0
Stone,Clay & Glass	1.4	0.8	1.3	2.1	2.6	2.3	1.0	0.7	1.0	1.7	1.4	0.5	1.4
Primary Metal Prod.	2.9	2.8	4.4	1.8	1.7	2.0	1.7	3.2	3.1	2.7	2.0	1.6	2.5
Fabricated Metal Prod.	3.9	3.2	3.7	2.7	3.1	3.0	2.4	3.2	3.0	2.7	2.5	1.7	2.9
Machinery exc. Elec.	4.3	2.1	2.0	2.3	2.1	2.8	1.9	2.3	2.4	2.1	1.5	1.3	2.3
Electrical Machinery	3.7	3.6	3.5	3.4	2.9	4.6	2.4	2.8	2.7	1.8	1.7	1.4	2.9
Transportation Equip.	2.6	2.4	2.2	1.6	1.4	2.2	3.0	4.5	2.6	1.7	1.7	1.4	2.3
Instruments & Rel. Prod.	3.0	2.0	2.4	2.0	3.3	5.0	1.9	2.0	3.9	2.9	2.5	2.4	2.8
Nondurable Goods	4.6	4.6	4.9	4.0	4.6	5.2	4.8	5.7	5.2	4.9	3.6	3.1	4.6
Food & Kindred Prod.	4.3	3.3	3.8	4.1	5.2	8.1	7.6	7.8	6.0	9.2	2.9	4.5	5.6
Textile Mill Prod.	6.2	6.2	5.9	5.1	5.1	5.9	7.3	6.2	5.9	5.0	4.4	4.8	5.7
Apparel	5.0	5.7	5.1	4.5	3.7	3.8	3.6	4.9	4.7	4.0	5.3	2.0	4.4
Paper & Allied Prod.	2.5	1.9	3.0	1.9	2.4	3.0	1.7	2.6	2.6	2.5	2.1	2.1	2.4
Printing & Publishing	3.5	3.4	4.0	2.6	4.3	5.2	2.8	2.6	4.1	3.7	3.6	3.2	3.6
Chemicals & Allied Prod.	1.4	1.6	2.8	1.1	1.3	2.5	1.7	0.7	0.7	1.2	0.7	0.7	1.4
Rubber & Plastics n.e.c.	5.9	5.8	6.4	5.9	6.0	6.1	7.0	8.4	9.0	7.0	4.5	4.0	6.3
Leather & Leather Prod.	9.7	8.2	8.3	7.7	8.8	7.4	8.2	13.4	8.0	7.3	5.1	4.9	8.1
Misc. Nondurable Goods	3.6	5.1	4.7	3.8	4.6	5.5	5.4	6.7	5.3	4.2	2.3	2.4	4.5

Source: Occupation/Industry Research Department

Massachusetts Separation Rates
1980

Item	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1980 Annual Average
TOTAL MANUFACTURING	3.8	3.1	3.3	3.7	3.9	3.6	3.9	5.2	3.8	3.4	2.8	2.9	3.6
Durable Goods	2.9	2.4	2.6	3.1	3.2	3.0	2.7	4.6	2.8	2.3	1.7	1.8	2.8
Lumber & Wood Prod.	4.9	3.4	4.7	4.2	5.2	4.3	12.6	6.9	6.1	5.0	4.4	4.2	5.5
Furniture & Fixtures	6.4	3.3	2.9	5.9	3.9	5.6	12.1	5.3	4.5	3.6	5.5	8.2	5.6
Stone, Clay & Glass	2.5	1.7	1.8	1.8	1.5	1.3	2.6	4.1	2.7	1.1	0.9	1.5	2.0
Primary Metal Prod.	3.6	3.1	2.1	3.1	4.2	3.0	4.1	3.1	3.2	3.0	1.6	2.0	3.0
Fabricated Metal Prod.	3.7	3.2	3.1	4.5	4.0	3.4	3.1	4.0	2.9	2.6	2.5	2.2	3.3
Machinery exc. Elec.	1.9	1.9	1.9	2.2	2.4	3.5	1.8	2.8	2.3	2.1	1.5	1.2	2.1
Electrical Mach.	3.2	2.6	3.2	2.8	3.3	2.4	2.4	3.5	2.9	2.2	1.2	1.6	2.6
Transportation Equip.	2.6	2.4	4.0	4.0	3.3	4.2	2.0	13.6	2.8	2.6	1.7	1.7	3.7
Instruments & Rel. Prod.	2.8	2.2	1.8	3.2	3.7	2.3	2.7	5.6	2.5	2.1	1.4	1.5	2.7
Nondurable Goods	5.1	4.1	4.4	4.6	4.9	4.6	5.7	6.0	5.3	4.9	4.4	4.7	4.9
Food & Kindred Prod.	5.3	3.9	5.1	5.2	4.9	5.2	8.2	6.3	4.1	3.6	3.6	6.4	5.2
Textile Mill Prod.	7.5	5.8	4.8	5.8	7.5	5.5	8.3	7.5	6.5	6.3	5.3	4.3	6.3
Apparel Prod.	4.3	3.3	4.7	4.1	4.1	3.3	4.6	5.1	5.2	5.8	4.5	2.7	4.3
Paper & Allied Prod.	2.5	2.8	2.9	2.3	3.4	2.5	2.5	3.8	3.8	2.6	2.0	1.7	2.7
Printing & Publishing	4.2	3.1	3.1	3.0	3.7	4.0	3.5	4.4	4.1	3.6	2.5	3.9	3.6
Chemicals & Allied Prod.	1.1	1.2	1.1	2.4	1.9	1.8	1.9	2.7	2.0	1.3	1.0	1.5	1.7
Rubber & Plastics n.e.c.	6.5	5.1	5.0	7.4	7.5	7.8	6.9	9.7	8.4	8.3	5.0	3.8	6.8
Leather & Leather Prod.	8.5	6.3	7.9	8.1	7.7	6.8	12.7	9.1	9.1	9.7	7.0	17.7	9.2
Misc. Nondurable Goods	6.6	5.7	5.3	4.5	4.2	4.5	6.1	6.4	4.9	3.8	9.7	4.5	5.5

Source: Occupation/Industry Research Department

Average Weekly Hours
Manufacturing Production Workers
1980

Industry	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Average
MANUFACTURING	40.2	39.8	39.7	39.8	39.4	39.8	39.1	39.5	39.7	39.2	39.3	40.2	39.6
Durable Goods	41.4	40.8	40.4	40.7	40.2	40.7	39.8	40.4	40.6	40.3	40.5	41.5	40.6
Lumber & Furniture	38.8	37.8	37.1	37.7	37.7	38.4	38.9	38.2	37.5	37.6	37.6	38.1	38.0
Primary Metals	42.7	42.7	43.3	42.1	40.1	41.6	38.5	41.2	42.3	40.3	41.9	42.9	41.6
Fabricated Metals	40.8	40.0	40.3	40.3	39.4	40.1	38.5	39.3	40.3	38.8	39.6	40.2	39.6
Machinery (exc. Elec.)	42.6	41.5	41.6	41.9	41.6	42.2	40.8	42.0	42.5	41.7	42.1	43.1	42.0
Electrical Machinery	40.7	42.0	39.9	40.5	40.1	39.8	40.5	40.6	40.7	40.5	39.7	41.4	40.5
Transportation Equip.	40.7	39.0	39.2	39.3	38.4	40.3	38.8	38.2	40.3	38.9	39.1	41.0	39.4
Instruments	41.8	39.7	39.8	40.3	40.4	40.9	40.0	39.6	37.9	40.7	41.9	42.1	40.4
Stone,Clay & Glass*	40.8	39.9	40.0	40.7	40.8	40.5	39.7	39.3	39.4	39.7	38.4	39.7	39.9
Nondurable Goods	38.7	38.4	38.8	38.6	38.2	38.5	38.2	38.3	38.6	37.7	37.7	38.4	38.3
Food	39.0	38.8	38.6	38.0	38.4	38.6	38.6	38.7	39.3	38.6	37.4	38.1	38.5
Textiles	40.7	40.7	41.9	40.9	40.2	40.7	39.2	40.3	40.4	39.0	39.3	40.3	40.3
Apparel	33.0	33.4	34.4	34.7	34.1	34.6	35.1	34.1	33.8	31.8	30.1	32.7	33.5
Paper & Allied Prod.	44.1	43.7	43.6	43.1	42.4	41.9	41.8	41.6	42.8	42.9	43.6	45.5	43.1
Printing	37.3	36.8	37.5	37.0	36.5	37.2	36.5	37.6	38.4	36.7	38.0	39.2	37.4
Chemicals	41.9	41.9	42.4	42.6	42.0	42.0	40.5	40.1	40.4	40.5	42.0	42.6	41.6
Rubber	40.7	40.1	40.6	40.3	39.8	39.4	40.3	40.8	40.2	39.7	40.2	41.2	40.3
Leather	36.4	36.3	35.5	36.2	36.4	37.0	34.7	35.8	36.4	35.8	35.6	35.4	36.0

Source: Current Employment Survey

* Stone, Clay and Glass not listed in correct SIC code order

Average Hourly Earnings
Manufacturing Production Workers
1980

Industry	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Average
Manufacturing	$6.26	$6.29	$6.36	$6.38	$6.44	$6.41	$6.49	$6.51	$6.63	$6.70	$6.78	$6.83	$6.51
Durable Goods	6.57	6.60	6.66	6.70	6.75	6.69	6.76	6.85	7.02	7.08	7.13	7.16	6.83
Lumber & Furniture	5.16	5.16	5.18	5.22	5.27	5.33	5.42	5.42	5.60	5.62	5.68	5.61	5.39
Stone, Clay & Glass	7.45	7.56	7.62	7.73	7.87	7.75	7.77	7.89	7.81	7.84	7.96	8.10	7.78
Primary Metals	6.57	6.66	6.63	6.69	6.65	6.72	6.75	6.69	6.57	6.61	6.68	6.78	6.67
Fabricated Metals	6.60	6.61	6.65	6.72	6.84	6.96	6.96	7.02	7.06	7.02	7.10	7.14	6.89
Machinery (exc. elec.)	6.59	6.65	6.70	6.79	6.80	6.78	6.82	6.92	7.04	7.16	7.22	7.23	6.89
Transportation Equip.	8.24	8.26	8.35	8.32	8.39	8.44	8.73	9.38	9.06	9.19	9.29	9.09	8.73
Instruments	6.82	6.86	6.89	6.87	6.89	6.88	6.92	6.99	7.06	7.24	7.24	7.38	7.00
Electrical Machinery*	5.97	5.97	6.08	6.11	6.28	6.05	6.04	6.27	6.52	6.56	6.54	6.62	6.25
Nondurable Goods	5.82	5.87	5.92	5.91	5.98	6.00	6.13	6.05	6.11	6.17	6.27	6.34	6.05
Food	6.41	6.34	6.50	6.62	6.98	6.73	6.85	6.79	6.52	6.60	6.97	6.96	6.69
Textiles	5.19	5.24	5.24	5.24	5.25	5.39	5.39	5.43	5.41	5.44	5.52	5.53	5.36
Apparel	4.82	4.83	4.84	4.92	4.86	4.91	5.02	4.97	5.00	5.11	5.08	5.16	4.96
Paper & Allied Prod.	6.37	6.43	6.47	6.48	6.39	6.41	6.47	6.56	6.72	6.74	6.83	6.87	6.56
Printing	6.92	7.10	7.17	7.31	7.23	7.32	7.40	7.32	7.36	7.43	7.52	7.60	7.31
Chemicals	7.46	7.66	7.63	7.55	7.51	7.69	7.77	7.75	8.07	8.03	8.38	8.16	7.81
Rubber	5.94	5.98	6.07	6.07	6.10	6.13	6.33	6.02	6.13	6.18	6.29	6.30	6.13
Leather	4.63	4.67	4.80	4.77	4.89	4.84	4.77	4.85	4.86	4.99	4.94	4.95	4.83

Source: Current Employment Survey

* Electrical Machinery not listed in correct SIC code order

Average Weekly Earnings
Manufacturing Production Workers
1980

Industry	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Annual Average
Manufacturing	$251.65	$250.34	$252.49	$253.92	$253.74	$255.12	$253.76	$257.15	$263.21	$262.64	$266.45	$274.57	$257.80
Durable Goods	272.00	269.28	269.06	272.69	271.35	272.28	269.05	276.74	285.01	285.32	288.77	297.14	277.30
Lumber & Furniture	200.21	195.05	192.18	196.79	198.68	204.67	210.84	207.04	210.00	211.31	213.57	213.74	204.82
Stone, Clay & Glass	303.96	301.64	304.80	314.61	321.10	313.88	308.47	310.08	307.71	311.25	305.66	321.57	310.42
Fabricated Metals	269.28	264.40	268.00	270.82	269.50	279.10	267.96	275.89	284.52	272.38	281.16	287.03	272.84
Machinery (exec. elec.)	280.73	275.98	278.72	284.50	282.88	286.12	278.26	290.64	299.20	298.57	303.96	311.61	289.38
Electrical Machinery	242.98	250.74	242.59	247.46	251.83	240.79	244.62	254.56	265.36	265.68	259.64	274.07	253.13
Transportation Equipment	335.37	322.14	327.32	326.98	322.18	340.13	338.72	358.32	365.12	357.49	363.24	372.69	343.96
Instruments	285.08	272.34	274.22	276.86	278.36	281.39	276.80	276.80	267.57	294.67	303.36	310.79	282.80
Primary Metals*	280.54	284.38	287.08	281.65	266.67	279.55	259.88	275.63	277.91	266.38	279.89	290.86	277.47
Nondurable Goods	225.23	225.41	229.70	228.13	228.44	231.00	234.17	231.72	235.85	232.61	236.38	243.46	231.72
Food	249.99	245.99	250.90	251.56	268.03	259.78	264.41	262.77	256.23	254.76	260.68	265.18	257.57
Textiles	211.23	213.27	219.56	214.32	211.05	219.37	211.29	218.82	218.56	212.16	216.94	222.86	216.01
Apparel	159.06	161.32	166.50	170.72	165.73	169.89	176.20	169.48	169.00	162.50	152.91	168.73	166.16
Paper & Allied Products	280.92	280.99	282.09	279.29	270.94	268.58	270.45	272.90	287.62	289.15	297.79	312.59	282.74
Printing	258.12	261.28	268.88	270.47	263.90	272.30	270.10	275.23	282.62	272.68	285.76	297.92	273.39
Chemicals	312.57	320.95	323.51	321.63	315.42	322.98	314.69	310.78	326.03	325.22	351.96	347.62	324.90
Rubber	241.76	239.80	246.44	244.62	242.78	241.52	255.10	245.62	246.43	245.35	252.86	259.56	247.04
Leather	168.53	169.52	170.40	--	178.00	179.08	165.52	173.63	176.90	178.64	175.86	175.23	173.88

Source: Current Employment Survey
* Primary Metals not listed in correct SIC code order

Job Bank Openings
by Occupational Category
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill*	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
TOTAL - ALL OCCUPATIONS	7,510	2,514	157	222	550	290	250	158	680	842	2,083
Professional, Technical, Managerial	992	457	8	7	43	38	32	25	150	103	146
Architect & Engineering	220	63	--	2	3	22	7	4	29	9	27
Math. & Physical Science	65	34	1	--	2	7	1	--	4	--	15
Life & Social Sciences	30	14	1	1	1	1	--	2	6	4	1
Medicine & Health	148	41	1	--	1	3	2	3	54	11	33
Education	44	18	--	1	12	--	1	--	18	2	4
Museum, Library	13	5	--	--	--	--	6	--	1	--	1
Law, Jurisprudence	4	3	--	--	--	--	--	--	--	1	--
Writing	10	3	1	--	--	--	--	--	3	--	2
Art	3	--	--	--	1	--	--	--	2	--	1
Entertainment	2	--	--	--	--	--	--	--	1	--	--
Administrative Spec.	121	63	--	--	14	4	7	3	7	18	11
Managers	266	164	4	1	11	1	5	11	18	15	45
Miscellaneous, Prof., Tech., Mgr.	62	10	--	2	4	--	2	2	7	34	5
Clerical Sales	2,131	938	34	29	123	53	35	17	81	249	629
Stenography, Typing & Related	699	417	9	8	43	27	11	4	35	39	122
Computing Acc't, Recor.	440	240	11	12	18	4	12	5	24	31	87
Prod. & Stock Clerk	129	36	--	4	35	8	2	--	2	15	48
Information Distr.	81	47	6	1	4	--	2	2	3	4	11
Misc. Clerical	49	25	--	2	2	--	--	--	3	9	6
Salespersons Services	29	3	2	2	1	--	--	2	5	4	19
Miscellaneous Sales	704	82	6	--	20	11	8	4	9	147	336

Job Bank Openings
by Occupational Category
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill*	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
Service	1,399	320	16	22	68	60	27	20	200	166	492
Domestic Service	84	57	--	--	5	8	0	13	4	7	16
Food & Beverage Preparation	273	98	2	6	21	--	6	--	18	19	99
Protective Services	442	59	9	6	8	44	9	--	51	80	133
Building & Related	129	46	1	--	14	6	10	1	11	22	21
Other Service Occupations	471	60	4	10	20	2	--	5	116	31	223
Farming, Fishing, Forestry	209	38	5	--	2	--	11	0	45	26	69
Plant Farming	104	36	5	--	2	--	11	--	22	--	29
Animal Farming	5	1	--	--	--	--	--	--	--	1	2
Forestry	100	1	--	--	--	--	--	--	23	25	38
Processing	246	33	18	47	20	1	9	4	30	17	67
Ore Refining, Foundry	22	--	3	--	1	--	--	2	2	2	11
Food, Tobacco	32	10	--	3	1	--	--	2	2	1	11
Paper	1	--	--	--	--	--	--	--	--	1	--
Chemicals, Plastics, Synthetics	141	11	14	39	7	--	3	--	24	12	27
Stone, Clay, Glass	3	--	1	--	--	--	--	--	--	--	3
Leather & Textiles	23	2	--	5	10	--	6	--	2	1	3
Processing Occupations NEC	24	10	--	--	1	1	--	--	--	--	13

Job Bank Openings
by Occupational Category
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill*	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
Machine Trades	602	138	17	34	67	24	34	31	41	69	184
Metal Machining	149	46	8	4	7	4	3	2	20	23	35
Metal Working NEC	80	19	--	--	24	3	--	--	1	11	36
Mechanics & Repair	150	43	3	6	8	14	9	4	9	18	41
Printing & Paperworking	33	4	--	--	9	--	2	7	7	3	5
Wood Machining	54	17	--	--	2	--	--	2	--	2	33
Textiles	51	3	6	7	6	--	20	1	--	9	3
Machine Trades NEC	85	6	--	17	11	3	--	15	4	3	31
Benchwork	702	158	45	27	72	47	66	36	63	60	176
Metal Products	131	64	--	4	1	--	6	--	3	7	47
Scientific & Electrical Equipment	242	45	--	1	24	33	54	25	31	6	39
Plastics, Synthetic Rubber	10	2	--	2	4	--	--	1	--	--	2
Stone & Wood Products	20	4	--	--	2	--	--	1	--	--	12
Textile, Leather	249	40	45	12	34	8	5	9	24	40	55
Benchwork Occupations	50	5	--	8	11	6	1	--	5	7	23
Structural	605	241	10	17	42	34	15	17	38	50	157
Metal Fabrication	125	77	3	5	12	13	1	2	4	2	16
Welders	69	23	--	--	9	--	--	0	10	2	29
Electrical	76	34	1	1	4	4	3	1	12	6	13

Job Bank Openings
by Occupational Category
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill*	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
Structural (continued)											
Painting	33	10	1	--	5	8	2	4	1	3	2
Excavating, Grading etc.	25	20	--	--	--	1	--	1	--	--	2
Construction NEC	243	72	4	11	9	6	5	8	8	30	84
Structural Occupations NEC	34	5	1	--	3	2	4	1	3	7	11
Miscellaneous	624	191	4	39	113	33	21	8	32	102	163
Motor Freight Occupations	76	32	--	7	13	1	1	2	--	14	13
Transportation Occupations	70	30	--	--	--	--	10	2	1	3	24
Packing, Material Handling	439	126	4	30	99	30	8	3	20	82	111
Production Distribution of Utilities	14	1	--	2	--	--	--	1	7	1	2
Graphic Art Work	20	2	--	--	1	--	1	--	4	2	11
Other	5	--	--	--	--	2	1	--	--	--	2

* Lawrence/Haverhill data for February

Source: Job Bank - March 1981

NEC: Not elsewhere classified

Average Pay by Occupational Category
Massachusetts Job Banks
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill 1/	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
TOTAL - ALL OCCUPATIONS	$ 9,576	$10,413	$ 8,347	$ 8,396	$ 9,378	$10,068	$ 8,842	$ 9,520	$10,289	$ 8,826	$ 8,896
Prof., Tech., Managerial 2/	14,844	16,286	15,149	13,029	12,807	18,307	11,292	11,627	14,099	11,826	13,711
Architect & Engineering	18,729	20,294	--	16,200	13,440	18,075	13,294	19,500	18,008	17,843	15,737
Math. & Physical Science	19,112	20,256	16,000	--	17,304	23,563	10,400	--	18,269	--	16,960
Life & Social Sciences	13,078	15,057	13,165	10,600	10,500	9,000	--	9,758	12,850	9,416	14,500
Medicine & Health	12,749	12,983	10,400	--	10,000	12,827	11,660	12,480	13,171	12.209	12,086
Education	12,549	12,860	--	9,000	11,100	--	9,500	--	12,123	9,640	16,169
Museum, Library	9,752	11,494	--	--	--	--	7,800	--	10,625	--	11,878
Law Jurisprudence	15,103	15,804	--	--	--	--	--	--	--	13,000	--
Writing	14,346	18,152	7,662	--	--	--	--	--	13,000	--	14,000
Art	11,000	--	--	--	16,916	--	--	--	10,400	--	12,200
Entertainment	12,480	--	--	--	--	--	--	--	13,000	--	--
Admin. Spec.	14,087	15,398	--	--	12,980	--	10,610	11,573	13,712	12,940	14,202
Managers	14,293	15,053	18,492	11,700	13,099	--	14,140	10,831	14,271	13,266	12,451
Misc., Prof., Tech.,	9,662	12,375	--	13,750	13,966	--	10,000	8,800	11,763	7,679	13,348
Clerical Sales 2/	8,211	8,544	7,819	8,215	8,713	8,433	8,032	8,459	8,774	7,798	7,774
Steno., Typing & Related	8,634	8,721	8,138	7,852	9,082	8,975	7,940	8,751	8,378	8,109	8,742
Computing Acc't., Recor.	8,169	8,255	7,592	3,508	9,328	8,294	8,080	8,216	8,138	7,846	8,013
Prod. & Stock Clerk	8,430	9,104	--	8,320	8,109	8,832	12,640	--	7,984	8,525	7,540
Information Distr.	8,430	8,800	7,696	7,800	7,722	--	7,124	6,968	7,281	10,184	7,667
Miscellaneous Clerical	8,920	8,726	--	8,108	8,060	7,973	--	--	8,533	8,706	11,272
Salespersons Services	12,778	18,867	10,400	--	15,600	--	--	--	10,400	--	12,682
Miscellaneous Sales	7,549	8,143	7,072	8,020	8,343	7,233	7,163	8,963	11,856	7,518	7,089

Average Pay by Occupational Category
Massachusetts Job Banks
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill 1/	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
Service 3/	$ 3.94	$ 3.94	$ 3.42	$ 3.39	$ 3.87	$ 3.55	$ 4.32	$3.43	$ 4.12	$ 4.00	$3.91
Domestic	3.49	3.50	--	--	3.50	--	--	--	3.35	3.50	3.48
Food & Beverage Preparation	4.05	4.07	3.35	3.35	3.88	3.84	5.35	3.35	4.19	3.84	4.16
Protective Services	3.95	3.92	3.37	3.48	4.05	3.49	4.41	--	4.31	4.12	3.83
Building & Related Prods.	3.91	4.15	3.75	--	4.18	3.54	3.81	4.12	3.86	3.74	3.84
Other Service Occupations	3.95	4.00	3.48	3.35	3.66	3.75	3.43	3.47	4.07	4.05	3.91
Farming, Fishing, Forestry 3/	4.13	4.39	3.50	--	4.50	--	4.33	--	4.04	3.40	4.02
Plant Farming	3.92	4.37	3.50	--	4.50	--	4.33	--	3.59	--	3.54
Animal Farming	3.95	4.00	--	--	--	--	--	--	--	3.40	4.18
Forestry	4.43	5.50	--	--	--	--	--	--	4.46	--	4.37
Processing 3/	4.24	4.12	3.80	4.00	4.36	5.00	4.75	3.43	5.44	4.47	3.95
Ore Refining, Foundry	4.07	--	4.00	--	3.50	--	--	3.50	5.43	4.00	3.81
Food, Tobacco	3.96	3.91	--	4.67	4.00	5.00	--	3.35	4.18	3.75	3.88
Paper	3.50	--	--	--	--	--	--	--	--	3.50	--
Chem., Plastic, Synthetic	4.37	3.95	3.70	3.95	5.27	--	3.75	--	5.65	4.75	4.11
Stone, Clay, Glass	4.21	--	4.64	--	--	--	--	--	--	--	4.00
Leather & Textiles	4.30	4.50	--	4.00	3.87	--	5.25	--	4.20	3.75	3.55
Processing Occup. NEC	4.11	4.45	--	--	4.00	--	--	--	--	--	3.85
Machine Trades 3/	5.05	5.70	4.04	4.02	4.60	5.34	5.00	5.18	5.32	4.86	4.88
Metal Machining	5.73	6.12	4.30	5.30	6.36	5.63	6.75	5.20	5.62	5.21	5.94
Metal Working NEC	4.49	4.39	--	--	4.15	4.42	--	--	3.80	4.43	4.55
Mechanics & Repair	5.41	5.48	4.33	5.19	6.08	5.64	4.67	4.69	4.93	4.83	5.92

Average Pay by Occupational Category
Massachusetts Job Banks
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill 1/	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
Printing & Paperworking	$ 4.51	$ 5.25	$ --	$ --	$ 4.05	$ 4.35	$ 5.00	$ 4.64	$ 4.91	$ 3.86	$ 3.90
Wood Machining	5.07	7.32	--	--	3.75	--	--	4.50	--	4.25	4.00
Textiles	4.34	3.40	3.55	3.35	4.25	4.88	4.89	3.50	--	4.83	3.78
Machine Trades NEC	4.37	5.02	--	3.51	4.19	--	--	5.76	5.85	5.54	3.88
Benchwork 3/											
Scientific & Elect. Equipment	3.97	4.50	--	6.00	3.89	3.82	3.42	4.35	3.48	3.44	4.50
Stone & Wood Products	3.68	4.25	--	3.75	3.35	--	--	3.50	--	--	3.50
Textile, Leather	3.67	3.76	3.79	3.43	4.19	3.98	4.25	3.47	3.41	3.60	3.66
Metal Products	3.59	3.40	--	3.55	6.00	--	3.42	--	3.57	3.61	3.86
Other Benchwork Occupations	4.71	4.70	--	3.73	4.02	4.92	4.00	3.50	4.00	4.03	3.68
Structural 3/	5.45	5.81	4.95	4.93	6.62	5.60	4.52	5.24	6.31	4.66	5.11
Metal Fabrication	5.77	5.86	4.99	4.27	7.60	6.42	5.76	4.00	7.87	5.00	5.09
Welders	5.58	5.78	--	--	6.25	--	--	--	6.30	5.00	5.13
Electrical	5.71	6.18	5.00	3.50	6.93	4.56	6.08	8.18	5.26	5.77	5.20
Painting	5.78	7.27	7.00	--	4.35	4.88	4.00	5.00	5.00	7.00	5.00
Excavating, Grading etc.	5.00	4.50	--	--	--	6.00	--	7.00	--	--	7.00
Construction NEC	5.31	5.82	4.75	5.36	7.33	5.78	4.05	5.05	7.59	4.33	5.16
Structural Occupations NEC	4.37	4.77	3.50	--	5.00	4.50	3.90	5.50	5.46	3.96	4.28

Average Pay by Occupational Category
Massachusetts Job Banks
March 1981

	State	Boston	Fall River	Fitchburg Leominster	Lawrence Haverhill 1/	Lowell	New Bedford	Pittsfield	Springfield Chicopee Holyoke	Worcester	Balance of State
Miscellaneous 3/	$ 4.38	$ 4.16	$ 3.45	$ 3.96	$ 4.06	$ 4.19	$ 3.73	$ 4.38	$ 4.91	$ 4.11	$ 4.47
Motor Freight	4.78	5.06	--	3.96	4.04	5.75	3.35	3.75	--	4.57	5.48
Transportation Occup. NEC	4.41	4.21	--	--	--	--	3.73	3.35	3.30	3.65	5.18
Packaging, Materials Handling	4.00	3.87	3.45	3.68	4.07	4.15	3.71	5.08	4.16	4.01	4.16
Prod. Distrib. of Utilities	7.11	8.34	--	8.17	--	--	--	5.62	7.78	5.79	4.50
Graphic Art Work	4.27	5.06	--	--	4.00	--	4.38	--	4.01	4.68	4.14
Other	5.75	--	--	--	--	4.00	3.75	--	--	--	8.50

1/ Lawrence/Haverhill data for February

2/ Average yearly salary

3/ Average Hourly pay

Source: Job Bank - March 1981

NEC: Not elsewhere classified

Massachusetts Community Colleges

Berkshire Community College	Pittsfield
Bristol Community College	Fall River
Bunker Hill Community College	Charlestown (Boston)
Cape Cod Community College	West Barnstable
Greenfield Community College	Greenfield
Holyoke Community College	Holyoke
Massachusetts Bay Community College	Wellesley Hills
Massasoit Community College	Brockton
Middlesex Community College	Bedford
Mount Wachusett Community College	Gardner
Northern Essex Community College	Haverhill
North Shore Community College	Beverly
Quinsigamond Community College	Worcester
Roxbury Community College	Roxbury (Boston)
Springfield Technical Community College	Springfield

Prepared March 1981

1978-1979
CAREER

No.	Name of Program	HEGIS NO.	Berkshire	Bristol	Bunker Hill	Cape Cod	Greenfield	Holyoke	Mass. Bay	Massasoit	Middlesex	Mt. Wachusett	North Shore	Northern Essex	Quinsigamond	Roxbury	Springfield
	BUSINESS	5001.															
1.	Administrative Assistant	5001.											● 2	● 3			
2.	Administrative Assistant — Education	5001.												● 3			
3.	Banking and Finance	5001.						● 3						● 3			● 2
4.	General Business	5001.	● 2	● 2				● 2	● 2	● 2	● 2	● 2					● 2
5.	Business Technology	5001.									● 2				● 2		
	ACCOUNTING	5002.															
6.	Accounting Associate	5002.	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 2
	AGRICULTURAL BUSINESS	5402.01											● **				
7.	Agricultural Industries	5402.01															
8.	Arboriculture	5402.02							● 2								
	AGRICULTURE TECHNOLOGIES	5402.03															
9.	Floriculture	5402.03											● **				
10.	Garden Center Management	5402.04															
11.	Horicultural Commodities	5402.08											● **				
12.	Horticulture	5402.							● 2								
13.	Landscape Technology	5402.05							● 2								● 2
14.	Natural Resources Management	5401.						● 1					● **				
15.	Nursery Management	5402.06							● 2								

KEY — 1-Day only; 2-Day and Evening; 3-Evening only; ** Apply at Essex Agricultural Tech

1978-1979
CAREER

No.	Name of Program	HEGIS NO.	Berkshire	Bristol	Bunker Hill	Cape Cod	Greenfield	Holyoke	Mass. Bay	Massasoit	Middlesex	Mt. Wachusett	North Shore	Northern Essex	Quinsigamond	Roxbury	Springfield
16.	Turf Management	5402.08										•**					
	DATA PROCESSING	5101.															
17.	Business Data Processing	5101.	•[1]			•[2]	•[2]		•[2]	•[2]		•[2]	•[2]		•[1]		•[2]
18.	Computer Programming	5103.		•[1]				•[2]	•[2]					•[2]			•[2]
19.	Key Punch Operator (1 yr)	5103002															
	HOTEL-MOTEL AND FOOD SERVICE	5010.	•[1]		•[2]	•[2]		•[1]									
20.	Culinary Arts	5404.1						•[3]				•**					
21.	Food Science & Nutrition							•[1]				•**					
22.	Food Service Management	5404.03											•[1]				
	MANAGEMENT	5004.															
23.	Building & Plant Management	5004.			•[3]												
24.	Business Management	5004.		•[2]			•[2]	•[2]		•[2]	•[2]	•[2]	•[2]	•[2]	•[2]		•[2]
25.	Industrial Management	5004.02								•[2]		•[2]					
26.	Nursing Home Management	5218.							•[3]								
27.	Office Management							•[1]				•[2]					
28.	Retail Food Distribution Management	5404.04										•**					
29.	Small Business Management	5004.03							•[2]								•[1]
30.	Retail Management				•[2]			•[1]	•[2]		•[2]				•[2]	•[1]	
31.	General Management					•[2]			•[2]		•[2]	•[2]			•[2]	•[2]	•[2]

KEY — 1-Day only; 2-Day and Evening; 3-Evening only; **Apply at Essex Agricultural Tech

1978-1979
CAREER

No.	Name of Program	HEGIS NO.	Berkshire	Bristol	Bunker Hill	Cape Cod	Greenfield	Holyoke	Mass. Bay	Massasoit	Middlesex	Mt. Wachusett	North Shore	Northern Essex	Quinsigamond	Roxbury	Springfield
	MARKETING																
32.	Fashion Merchandising	5004.05									● 1		● **				
33.	Insurance	5004.06			● 2								● 2				
34.	Marketing	5004.07		● 2			● 3			● 2	● 2	● 2	● 2				● 2
35.	Real Estate	5004.08			● 2				● 2				● 2				
36.	Retailing	5004.09				● 2					● 2	● 2					
	MEDIA TECHNOLOGY						● 1										
37.	Commercial Art	5012.01	● 1														
38.	Electronic Media-Production Technician (TV)	5008.															● 1
39.	Radio Technician	5310.															
40.	Telecommunications Technician	5310.02															● 1
41.	Public Communications Technology	5008.										● 1					● 1
	GRAPHIC & VISUAL COMMUNICATION	5012															● 2
42.	Design & Illustration	5012.02			● 1		● 1										
43	Graphic Arts (Commercial Art) Technology																
44.	Journalism	5012.		● 1													
45.	Photography & Media Production	5006.02															
46.	Printing Management	5007.			● 1												● 2
	OFFICE EDUCATION	5009.															

CAREER

No.	Name of Program	HEGIS NO.	Berkshire	Bristol	Bunker Hill	Cape Cod	Greenfield	Holyoke	Mass. Bay	Massasoit	Middlesex	Mt. Wachusett	North Shore	Northern Essex	Quinsigamond	Roxbury	Springfield
47.	Court Reporting	5005.03							● 2								● 1
48.	Office Assistant (1 yr)	5005.04					● 1			● 2	● 3	● 2	● 2				● 1
49.	Administrative Services Management (1 yr)							● 1									
50.	Office Services											● 2					
	SECRETARIAL																
51.	Administrative — Word Processing												● 2				
52.	Bilingual (1 yr)	5005.11		● 3	● 1												● 1
53.	Executive	5005.12	● 1	● 2	● 2	● 2	● 1	● 2	● 1	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 1
54.	General	5005.13							● 3	● 2	● 2	● 2			● 3		● 3
55.	Legal	5005.14		● 2	● 2	● 2	● 1	● 2	● 1		● 2	● 2	● 2	● 2		● 1	● 1
56.	Medical	5005.15		● 2	● 1	● 2	● 1	● 2	● 1		● 2	● 2	● 2	● 2		● 1	● 1
57.	Statistical	5005.16												● 2			
58.	Technical	5005.17							● 1					● 1			● 1
	TRANSPORTATION																
59.	Aviation Science	5302.											● 2				
60.	Air Transportation	5011.01			● 1												
61.	Mass (urban) Transportation	5011.02			● 1												
62.	Motor Freight (Rail/Truck)	5011.03			● 1												
	ENGINEERING	5301.															

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63.	Architectural Technology																● 2
64.	Building & Plant Management																
65.	Construction & Building																
66.	Interior Design				● 3												
67.	Kitchen Design																
68.	Heating Power & Air Conditioning																● 2
69.	Civil Technologies	5309.		● 1			● 1							● 1			● 2
70.	Land Surveying	5309.		● 1													
71.	Drafting Assistant (1 yr)	5304		● 1						● 1							
72.	Electro-Mechanical Drafting (1 yr)										● 1						
73.	Chemical Technology	5305.															
	ELECTRONIC TECHNOLOGIES																
74.	Electro-Mechanical Technology	5311.		● 2						● 2		● 2	● 2				● 1
75.	Cable TV Technician	5008.															
76.	Computer Maintenance & Service Technician																● 1
77.	Electrical Repair & Maintenance Assistant	5310.															
78.	Electrical Technology	5310		● 2													● 2
79.	Electronic Benchwork Technician	5310.															● 1
80.	Electronic Engineering Assistant	5310.	● 1														

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81.	Electronic Technology	5310.	● 1					● 2		● 2	● 1	● 2		● 2	● 1	● 1	● 2
82.	Laser Electro-Optics Technology	5399.															● 1
83.	Two-way Radio Technician																
	INSTRUMENTATION TECHNOLOGY																
84.	Bio-Chemical Technician	5314.															
85.	Bio-Medical Technician	5314.															● 1
	MECHANICAL TECHNOLOGIES	5301.															
86.	Advanced Metal Machinery Technology																● 2
87.	Automotive Technology	5306.									● 1	● 2					● 1
88.	Engineering Technology	5301.						● 1				● 2					
89.	Industrial Technology	5312.					● 3										● 1
90.	Manufacturing Engineering	5301.											● 3				
91.	Machine & Tool Design Technology	5303.															● 2
92.	Mechanical Engineering	5301.		● 1								● 2					
93.	Mold Making (Mechanical Technology)	5301.	● 1														
94.	Plant Engineering												●				
95.	Quality Control (1 yr)																
	HEALTH																
96.	Dental Technologies																

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97.	Dental Assistant (1 yr)	5202.									● 1						● 1
98.	Dental Hygiene	5203.		● 1		● 1					● 1			● 1			● 1
99.	Dental Laboratory Technology	5204.								● 1	● 1						
100.	Air Quality	5408.01															● 1
101.	Conservation Technology	5499.											●**				
102.	Environmental Technology	5408.02		● 2				● 1						● 1	● 3		● 1
103.	Peat Control	5408.03															● 1
104.	Public Environmental Health Technician	5408.04											● 3		● 3		
105.	Solid Waste Disposal	5408.05															● 1
106.	Water Quality	5408.07															● 1
107.	Medical Laboratory Technician			● 1					● 1		● 1						● 1
	MEDICAL RECORDS TECHNOLOGY	5213.															
108.	Medical Transcriptionist	5214.02				● 3			● 3	● 2			● 2				
109.	Medical Records Technology	5213.						● 1	● 2					● 1			
	NURSING																
110.	Nurse Assistant (1 yr.)(LPN)	5209.01															
111.	Nurse Education (RN)	5208.	● 1	● 1	● 1	● 1	● 1	● 1	● 1	● 1	● 1	● 1	● 1	● 2	● 1		● 2
112.	RADIOLOGIC TECHNOLOGIES																
113.	Nuclear Medical Technician	5207.01			● 1												● 1

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114.	Radiologic Technology	5207.03			● 1			● 1	●		● 1		● 1	● 1	● 1		● 1
115.	Radiation Therapy	5207.02															● 1
116.	Diagnostic Medical Sonography (Ultrasound Tech)	5207.04									● 1						● 1
	REHABILITATION TECHNOLOGIES																
117.	Occupational Therapy Assistant	5210.											● 1		● 2		
118.	Physical Therapy Assistant	5219.											● 1				● 1
119.	Respiratory Theraphy	5215.								● 1			● 1	● 1	● 1		● 1
120.	EMERGENCY MEDICAL TECHNOLOGY /(81hour course)			● 3	● 2	● 3	● 3	● 2		● 3	● 3	● 1	● 2		● 3		● 3
121.	ANIMAL SCIENCE TECHNOLOGY	5206.						● 1					● **				
122.	FOOD SCIENCE & NUTRITION/ DIETETIC TECHNOLOGY							● 1					● **	● 1			
123.	MEDICAL ASSISTANT	5214.01									● 1						●
124.	PEDIATRIC ASSISTANT (1 yr)	5299.02															
125.	PUBLIC HEALTH TECHNICIAN	5408.											● 3				
126.	HEALTH CARE FACILITY ACTIVITIES DIRECTOR	5506.01			● 3									● 1			
127.	HEALTH CARE FACILITIES MANAGEMENT							● 3									
	SERVICES																
128.	General Human Services (w/concentrations of																
	0 & 18 credit hours in the listed areas)	5506.02	● 1		● 2							● 2					
129.	Geriatric Associate	5299.04	● 1														

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130.	Youth Services Associate		● 1														
131.	Social Service Associate	5506.04	● 1														
132.	Child Care			● 1								● 2					
133.	Children with special needs											● 2					
134.	Probation											● 2					
135.	Public Administration	5508.01										● 2					
136.	Social Welfare											● 2					
	HUMAN SERVICES WITH OPTIONS																
137.	Cosmetology Management	5006.01															
138.	Cosmetology Assistant (1 yr)	5006.02															● 1
139.	Early Childhood Education		● 1				● 1	● 1	● 2				● 2	● 1	● 1	● 2	● 2
140.	Early Childhood Education (1 yr)	5503.01								● 3							
141.	Drug & Alcoholic Rehabilitation	5299.03											● 3				
142.	Educational Assistant	5503.03												● 3			
143.	Geriatric Associate	5299.04	● 1			● 3								● 2	● 3		
144.	Mental Health Associate	5216.01	● 1	● 3						● 1	● 2	● 2	● 1				● 1
145.	Social Service Associate	5506.04							● 2			● 3					
146.	Social Work Associate (1 yr)	5506.05								● 3							
147.	Legal Assistant									● 3							

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148.	Recreation Leadership	5506.03	● 1				● 1		● 1								
149.	Educational Assistant (language Communication Opt)												● 3				
	SPECIAL EDUCATION																
150.	Language Communication Assistant												● 3				
151.	Deafness Communication												● 2				
	LEARNING RESOURCES CENTER TECHNOLOGIES																
152.	Audio-Visual (Media Technology)	5504.01															
153.	Library Assistant (1 yr)	5504.03		● 1													
154.	Library Associate	5504.02		● 2													
	PROTECTIVE SERVICES ADMINISTRATION	5504.03															
155.	Conservation Law Enforcement																
156.	Corrections	5505.02						● 2				● 2					
157.	Criminal Justice	5505.01	● 3		● 2	● 2											
158.	Law Enforcement	5505.03		● 2			● 1	● 2	● 2	● 2	● 2	● 2	● 2	● 2	● 3		● 2
159.	Occupational Safety & Health Technology	5599.01										● 3					● 1
160.	Security Administration	5599.02											○ 2				
161.	Fire Protection & Safety Technology	5507.	● 3	● 3	● 2	● 3	● 3		● 3	● 3	● 3	● 3	●	● 3	● 3		● 2
	PUBLIC ADMINISTRATION																
162.	Community Planning & Development	5508.01															

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163.	Federal Government	5508.02							● 3								
164.	Local Government	5508.04															
165.	Public Administration	5508.05											● 3				
166.	State Government	5508.06															
167.	Urban Studies	5508.07						● 1									
168.	Land Use Planning	5508.03															
169.	Labor Studies				● 3												
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TRANSFER

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	BUSINESS	5600	●	●2	●2	●2	●	●2	●2	●2	●2	●2	●2	●2	●	●2	●2
	Business Education			●2				●2	●2		●2	●2					
	Education	5610.		●2		●2		●2								●2	●1
	Engineering	5620.	●1	●1		●2	●1	●1						●1	●1		●1
	Fine Arts— Visual & Graphic Arts	5630.	●1				●1	●1				●2					
	Liberal Arts	5640	●2	●2	●2	●2	●2	●2	●2	●2	●2	●2	●2	●2	●2		●2
	Liberal Arts— Data Processing Concentration						●1										
	Science	5650.				●2		●1								●2	●1
	Physical Education (& Athletic Training Option)		●1														
	Liberal Studies/General Studies		●2					●2		●2	●2	●2	●2			●2	●2
	Library Science			●2													
	Pre-Professionals			●2				●1				●					
	English															●2	
	Social Science															●2	
	Theater Arts		●1									●2					
	Secretarial Science			●3									●2				
	Music Education							●1									

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